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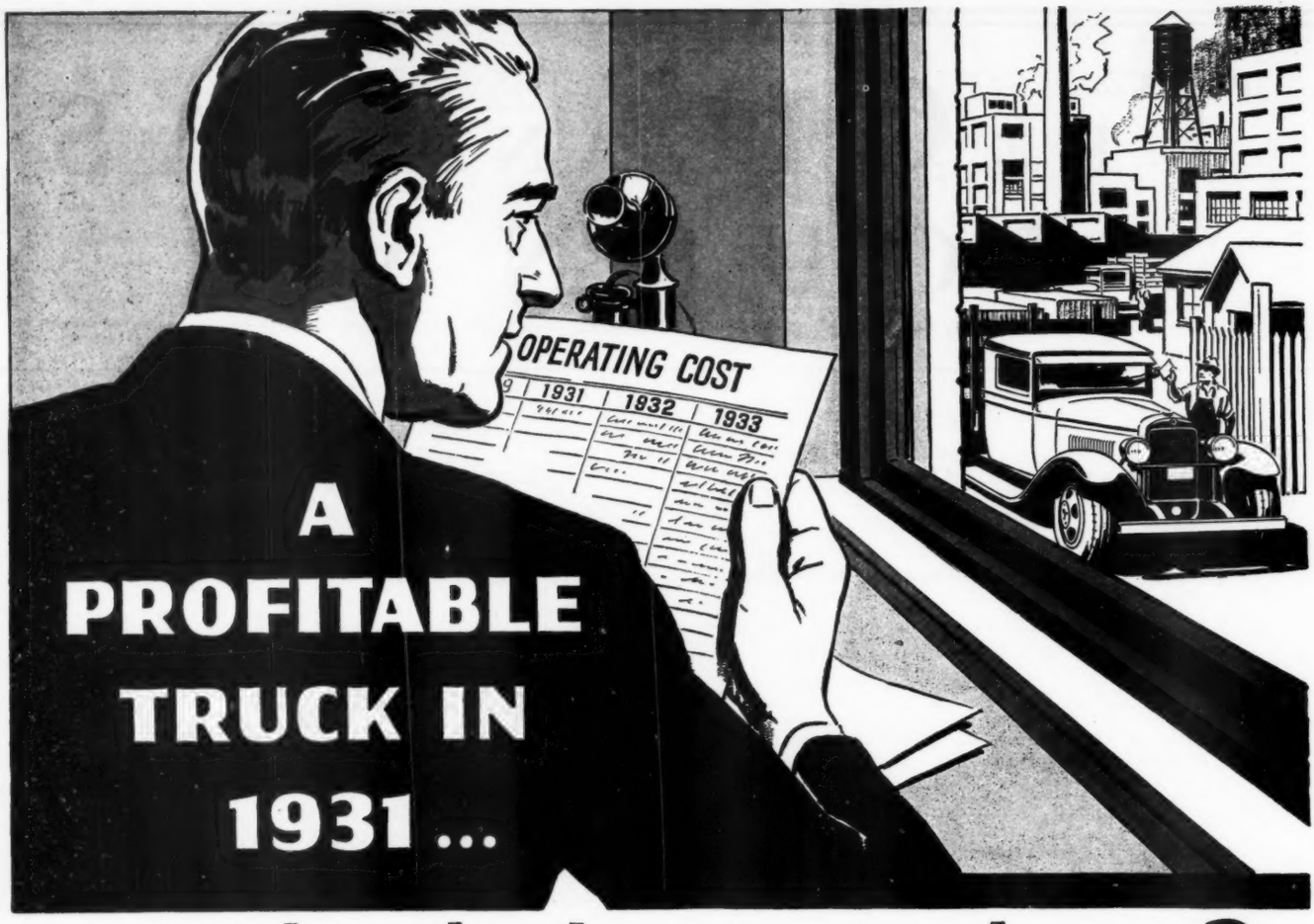

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Rigid Enforcement of Government Regulations on Production and Price Absolutely Necessary

By ANDREW M. ROWLEY

PRICE cutting has been the bane of the petroleum industry and the basic cause of most of its troubles. To it can be attributed most of the losses incurred in the business in recent years and the chaotic conditions which have existed so long. Now, if government regulation of prices, forced by price cutters, eliminates this unfair competition, the greatest cause of trouble in the industry will have been remedied and the road will be open to a quick and orderly return to stability and reasonable prosperity.

Success of the NRA as it applies to the petroleum industry depends upon the maintenance of a price structure which will permit the companies to make a reasonable profit on operations and allow them to keep in employment the additional men necessitated by provisions of the petroleum code at the wage levels fixed by that code. Stability of the price structure depends entirely on two things—curtailment of crude oil production to quotas set by the government and runs to stills to prevent a piling up of burdensome stocks which would menace the price structure; and strict enforcement of the provisions of the price fixing order.

Strict and impartial enforcement of the government's regulations regarding production and prices is of paramount importance to the entire petroleum industry. Hot oil and excess production must be stopped quickly or there will be a weakening of the crude oil price structure which will undermine the effect of the government's order fixing minimum prices. Cut price dealers in gasoline must either conform to the provisions of the price fixing order or be forced out of business. They are the great trouble makers of the industry, along with producers who refuse to abide by production regulations and entirely too much is at stake to compromise any longer with these recalcitrants.

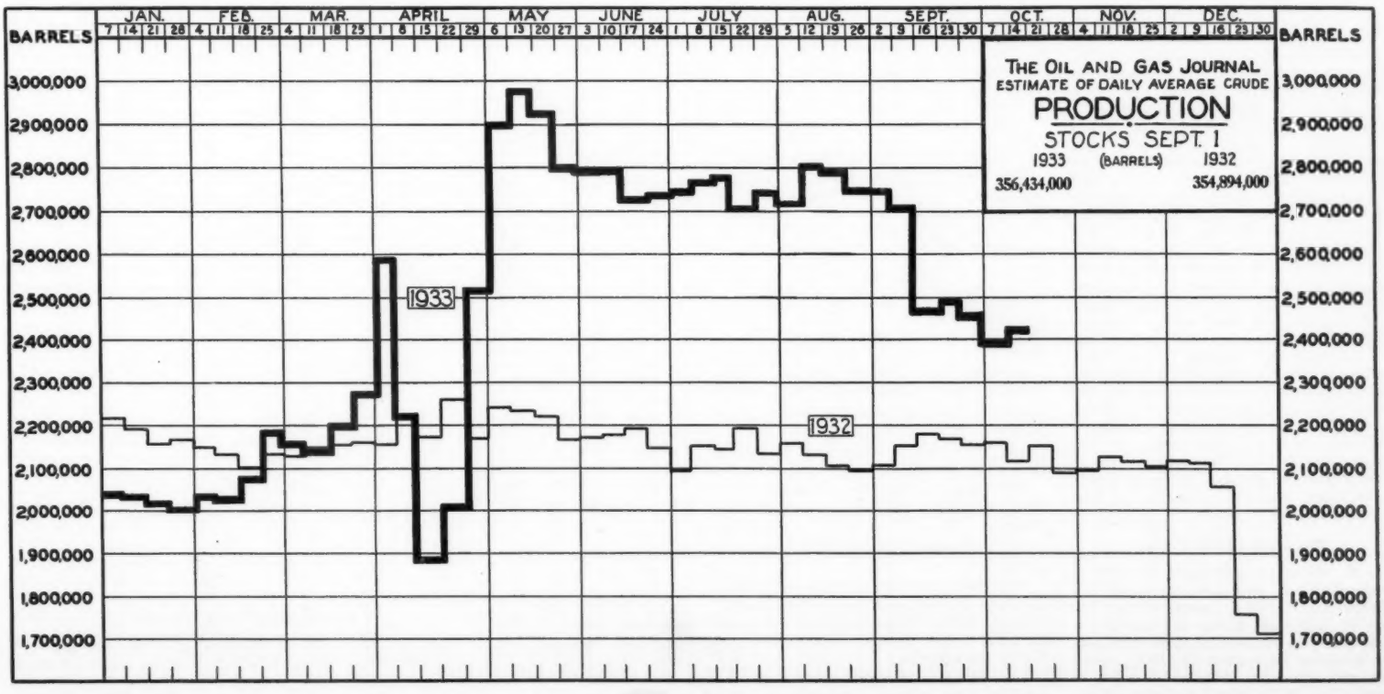
The petroleum industry has its greatest opportunity right now to put its house in order, adjust its operations to a sound business basis and start to enjoy reasonable prosperity. If it does not take full advantage of this chance it will be just too bad. Sincere co-operation all along the line is absolutely necessary. Everyone, large and small, will be doing the entire industry a terrible injustice if he fails to do everything in his power to prevent cheating and circumvention of the letter and spirit of the regulations relating to crude oil production and the strict maintenance of minimum prices.

Crude Oil Production in the United States

Estimated daily average production for the week ending October 14, and a comparison with previous week and one year ago, follows:

	Oct. 14	Oct. 7	Oct. 15, 1932
Oklahoma—			
Oklahoma City	180,330	142 475	57,370
Seminole-St. Louis	112,815	120,675	105,430
Remainder of State	214,410	215,630	209,740
Total Oklahoma	507,555	478,780	372,540
East Texas—			
Lathrop	207,441	206,005	141,637
Kilgore	150,777	149,733	109,256
Joiner	134,517	133,586	117,105
Total East Texas	492,735	489,324	367,998
West Texas	127,665	127,638	165,614
North Central Texas	81,215	76,241	72.485
Texas Panhandle	45,092	47,334	48,552
East Central Texas	45.628	45,766	52,336
Gulf Coast—Texas	186 665	183 942	118,294
Southwest Texas	47,810	45,733	61,722
Total State of Texas	1,026,810	1,015,978	887,001
Kansas	112.470	116 025	101,760
North Louisiana	25,820	25,590	29,795
Gulf Coast—Louisiana	47,210	47,724	33,238
Arkansas	32,925	32,980	33,905
Eastern Fields	130.000	128,000	116,000
Rocky Mountain area	80,480	81,830	73,204
California—			
Santa Fe Springs	46,500	47,500	59,000
Long Beach	61,750	60,500	68,750
Playa Del Rey	10,500	10,900	15,500
Elwood	12,900	14,000	13,250
Kettleman Hills	61,000	59,000	60,500
Remainder of State	282,100	286,850	254,000
Total California	474,750	478,750	471,000
Total United States	2,438,020	2,405,657	2,118,443

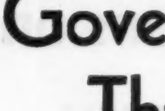
Increase 32,363 Bbls. Daily.



Government Fixes Crude and Refined Oil Prices Throughout United States, Effective Dec. 1

By CHARLES E. KERN
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Oct. 16.—Harold L. Ickes, Secretary of the Interior, as administrator under the petroleum code, today issued an order fixing minimum prices for petroleum and its principal products, effective as of December 1, 1933. The order may be modified by the administrator prior to its effective date on the basis of findings and recommendations of the Petroleum Administrative Board, of which Nathan R. Margold, solicitor of the Interior Department, is chairman. This board is empowered to make its findings and recommendations on the basis of hearings granted all persons in the industry raising objections to any items in the schedules, and on the basis of a general investigation into the industry.



The schedules contained in the order were recommended by the Planning and Co-ordinating Committee, composed of leaders in the petroleum industry. The basic minimum price for Mid-Continent crude petroleum, 36-degree gravity, is fixed at $1.11. For other fields, prices based on the necessary differentials are fixed, with the usual variations according to the grade of crude petroleum. Minimum wholesale and retail prices for petroleum products are likewise fixed subject to the same possible revision based on findings of the Petroleum Administrative Board. For gasoline, minimum prices at the refineries in the various areas are fixed. A nation-wide scale of differentials based on fixed refinery prices is provided to govern filling station prices.

Text of the Order

The text of the order follows:

Whereas evidence submitted by the Planning and Co-ordinating Committee appointed under the Code of Fair Competition for the petroleum industry indicates the present existence of unfair competitive practices in the petroleum industry leading to constant and recurring price wars and price cutting and making imminent the danger of the further spread of such competitive abuses, I find and determine that these competitive abuses have created an emergency which threatens the stability of the interstate market for petroleum and the products thereof; that they have obstructed, burdened, or interfered with interstate commerce in petroleum and its products and threaten to continue to obstruct, burden, or interfere with such commerce, and that their continuance and further spread will make it impossible to fulfill the purposes of the National Industrial Recovery Act and the code of fair competition for the petroleum industry as expressed in the declaration of policy ot said act and the preamble of said code.

Minimum Prices Fixed

Now, therefore, pursuant to Title 1 of the National Industrial Recovery Act (Public No. 67, 73rd Congress) and the code of fair competition for the petroleum industry, approved August 19, 1933, and modified September 13, 1933, under said act, and the President's order of August 28, 1933, issued under said act and said code, it is hereby declared to be an act of unfair competition in violation of the said act and code, for any producer, wholesaler, jobber, refiner, distributor, retailer or others in anywise dealing in petroleum and the products thereof on or after December 1, 1933, to sell or otherwise dispose of, or to buy or otherwise acquire any petroleum or the products thereof at a price less than the applicable price set forth in the schedule of prices proposed by the Planning and Co-ordinating Committee appointed under the code of fair competion for the petroleum industry, under date of September 25, 1933, a certified copy of which, marked Appendix A, is attached to and made a part of this order; provided, however, that the said schedule of prices may be modified or amended after the submission of findings based upon such hearings and investigations as the Petroleum Administrative Board is hereinafter authorized and directed to conduct.

Any person, natural or artificial, having objection to the minimum prices provided for in the attached schedule may file with the Petroleum Administrative Board, and should so file at once a full and complete statement in writing, verified as to facts by affidavit, setting forth such objection and the facts upon which the objection is based. All such objection will be considered at hearings which the said board is hereby authorized and directed to conduct, under rules and regulations to be prescribed by it beginning October 30, 1933. No person will be heard who has not filed such written objection and statement on or before November 15, 1933. The said board is authorized and directed to group cases that it may deem to be similar or present similar questions of fact, and it is hereby further authorized and empowered to collect and obtain such other information and reports as it may deem necessary to carry out the provisions and purposes of the aforesaid code of fair competition.

Approved and promulgated this sixteenth day of October, 1933.

(Signed) HAROLD L. ICKES
Administrator of the code of fair competition for the petroleum industry, and Secretary of the Interior.

Committee's Recommendations

The detailed recommendations of the Planning and Co-ordinating Committee of the petroleum industry, on which today's order is based, here follow as Appendix "A":

Appendix "A"

Honorable Harold L. Ickes,
Oil Administrator,
Washington, D. C.
Dear Sir:

In accordance with the request of Mr. Myers, I have today handed to him the suggested schedule of minimum prices as follows:

(1) Schedule covering crude oil prices throughout the fields of the United States.

(2) Schedule covering prices of refined products throughout the United States.

(3) Minimum differential on products generally.

(4) Minimum differential on refined products for the states of Washington, Oregon, Idaho, Utah, Nevada, California, Arizona, New Mexico, Alaska and the Hawaiian islands.

(5) Specific recommendations on differential on refined products for the states in the Rocky Mountain district named.

Yours very sincerely,
R. B. BROWN, Secretary
Planning and Co-ordinating Committee.

Crude Oil Prices

The Planning and Co-ordinating Committee adopted Friday afternoon, September 8, 1933, the following report submitted by Ralph Zook as a suggested basis for prices of crude oil throughout the United States:

OKLAHOMA, KANSAS, NORTH AND NORTH CENTRAL TEXAS, CENTRAL TEXAS

Mexia, Wortham, Corsicana light and Panola County and Fisher and Jones Counties, Texas:	
Below 25	$ .87
25-25.9	.89
26-26.9	.91
27-27.9	.93
28-28.9	.95
29-29.9	.97
30-30.9	.99
31-31.9	1.01
32-32.9	1.03
33-33.9	1.05
34-34.9	1.07
35-35.9	1.09
36-36.9	1.11
37-37.9	1.13
38-38.9	1.15
39-39.9	1.17
40 and above	1.19
Corsicana, Tex., heavy	.84
East Texas	1.17

WEST TEXAS

Pecos, Winkler, Mitchell, Crane, Upton, Crockett, Ector, Howard Glasscock Counties, Texas, and Lea County, New Mexico	$ .84
Conroe-Montgomery County, Texas:	
Below 35	1.24
35-35.9	1.26
36-36.9	1.28
37-37.9	1.30
38-38.9	1.32
39-39.9 and above	1.34
40 and above	1.36
Dutton Creek, LaBarge, Rock Creek and Salt Creek, Wyo.:	
Below 29	.95
29-29.9	.97
30-30.9	.99
31-31.9	1.01
32-32.9	1.03
33-33.9	1.05
34-34.9	1.07
35-35.9	1.09
36-36.9	1.11
37-37.9	1.13
38-38.9	1.15
39-39.9	1.17
40 and above	1.19
Big Muddy, Wyo.	1.17
Cat Creek, Mont.	1.39
Elk Basin, Wyo.	1.29
Frannie, Wyo., light	.93
Frannie, Wyo., heavy	.82
Fort Collins, Colo.	1.05
Florence, Colo.	.99
Grass Creek, Wyo., light	1.29
Grass Creek, Wyo., heavy	.70
Greybull-Torchlight, Wyo.	1.29
Oregon Basin, Wyo.	.79
Garland-Byron, Wyo.	.70
Hamilton Dome., Wyo., Argo and Empire	.70
Hamilton Dome, Wyo., Columbus	.60
Poison Spider, Wyo.	.65
Hogback, N. Mex.	1.15
Isles, Colo., heavy	.92
Isles, Colo., light	1.07
Lance Creek, Wyo.	1.34
Lost Soldier, Wyo.	.99
Lander, Wyo.	.84
Osage, Wyo.	1.01
Pondera, Mont.	1.14
Kevin-Sunburst, Mont.	1.24
Greasewood Dome	1.19
Tomball, Tex.	1.30

SOUTH AND SOUTHWEST TEXAS

Darst Creek	$ .94
Mirando	.99
Duval County	.99
Pettus	1.99
Salt Flat	.94
Saxet	1.13
Refugio heavy	.99
Lytton Springs	1.13
Luling	.83

TEXAS PANHANDLE

Carson, Hutchinson and Moore Counties:	
Below 35	.85
35-35.9	.87
36-36.9	.99
37-37.9	.91
38-38.9	.93
39-39.9	.95
40 and above	.97
Gray County:	
Below 35	.95
35-35.9	.97
36-36.9	.99
37-37.9	1.01
38-38.9	1.03
39-39.9	1.05
40 and above	1.07

NORTH LOUISIANA-ARKANSAS

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, DeSoto, Sabine, Sarepta, Carterville and Pine Island:	
Below 25	$ .87
25-25.9	.89
26-26.9	.91
27-27.9	.93
28-28.9	.95
29-29.9	.97
30-30.9	.99
31-31.9	1.01
32-32.9	1.03
33-33.9	1.05
34-34.9	1.07
35-35.9	1.09
36-36.9	1.11
37-37.9	1.13
38-38.9	1.15
39-39.9	1.17
40 and above	1.19
Urania, La.	.79
Stephens, Ark.:	
Below 29	.80
29 and above	.83
Smackover, Ark.	.84

GULF COAST, TEXAS AND LOUISIANA

Below 25	$ .99
25-25.9	1.00
26-26.9	1.01
27-27.9	1.02
28-28.9	1.03
29-29.9	1.04
30-30.9	1.05
31-31.9	1.06
32-32.9	1.07
33-33.9	1.08
34-34.9	1.09
35-35.9	1.10
36-36.9	1.11
37-37.9	1.13
38-38.9	1.15
39-39.9	1.17
40 and above	1.19

It is suggested for consideration of the adminstrator that the price for crude production in the settled areas comprising the states of New York, Pennsyl-

vania, West Virginia, Kentucky, Ohio, Illinois and Indiana be allowed, during the test period, to seek its competitive price relationship with Mid-Continent 36-gravity in an open market. The demand from this area is equal to and, in some cases, in excess of the supply, and it is believed that no harm can be done by following this suggestion. However, if in the administrator's opinion a price should be posted for all grades, the attached schedule is submitted as the recommendation of the buyers of the majority of crude in these areas.

PENNSYLVANIA GRADE AREA

Bradford-Alleghany	$2.50
National Transit Lines, the Pennzoil Co.	2.45
Eureka	2.15
Southwest Pennsylvania	2.20
Buckeye	2.00
Lima, Ohio (Ohio Oil Co. posting)	1.42
Princeton (Southwest Indiana and Illinois (Ohio Oil Co. postings)	1.34
Western Kentucky (Ohio Oil Co. posting)	1.29
Somerset, Ky. (Ashland lines, Ashland Refining Co.)	1.34
Corning (Ohio Oil Co.)	1.32
Michigan crude (Midland)	1.11

Pennsylvania Grade oil is produced in the States of New York, Pennsylvania, West Virginia and the southeastern part of Ohio.

Eureka Is Base Crude Price

Eureka grade, produced in West Virginia, is the base crude price for the Pennsylvania grade area and other Pennsylvania areas take their price relationship from it, based on current demand, varying refining costs, and delivered cost to competitive points for the crude from the different areas.

The competitive point for the sale of Pennsylvania Grade oil is in the Oil City, Pa., area, and by varying the price from the different areas up or down 5 cents, it is possible to switch a refiner from one oil to another and in this manner keep the stocks in the various areas at a fairly constant level. For this reason it is impossible to maintain a fixed relationship between crudes from the different areas in Pennsylvania.

There has been a shortage of Pennsylvania crude and for this reason has advanced more rapidly than the area in the southwest of the United States. It is recommended that minimum prices of Pennsylvania Grade areas be established at less than the differential which was in existence during the recent period when Oklahoma crude of 36-gravity was 64 cents per barrel. It is now being priced on a "shortage" basis takes into consideration some of the differential between the two qualities and for the test period the differentials as set up in the following paragraphs are recommended. It is our understanding that prices above these can be posted if desired.

Eureka Grade

For a test period and assuming a base price for Mid-Continent 36 gravity oil of $1.11 per barrel, a recommended price for Eureka grade is $2.15 per barrel, a difference of $1.04 per barrel. The supporting data on the attached sheet shows an average price difference of $1.30 for the period from 1925 to 1932, inclusive, $1.27 for the years 1928 to 1932 inclusive, and on September 2, 1933, it is $1.23.

Bradford, Pa.-Allegany, N. Y. District

At the other extreme end of the Pennsylvania grade area is located the Bradford-Allegany district and the average difference in cents per barrel between Eureka and Bradford for the years 1925 to 1932 inclusive is 41 cents, for the years 1928 to 1932 inclusive the difference is also 41 cents, and on September 2, 1933, it is 38 cents.

The recommended price for Bradford-Allegany district is 35 cents above Eureka. With the $1.11 Oklahoma, this would make Bradford district $2.50 per barrel or a differential of approximately $1.40. The attached graph shows the relationship between Bradford and Mid-Continent 36 gravity covering a period from 1911 to date, and you will notice the average difference from Mid-Continent crude is $1.11 or $1.40 above Mid-Continent 36 gravity.

Southwest Pennsylvania

A posted price for this area has been for some time and is now 5 cents per barrel above that posted for Eureka grade, and it is recommended that this difference continue.

National Transit Lines—Pennzoil Co.

The oil from this area has been for some time and is now quoted at 5 cents per barrel less than for the Bradford-Allegany district, and it is recommended that this difference be continued.

Buckeye

The oil from this area has been for some time and is now 15 cents per barrel less than for Eureka grade, and it is recommended that this difference continue.

Summary

Recommended differential between Oklahoma 36 gravity and Pennsylvania grade area when the price for Mid-Continent is approximately $1.10:

Eureka—36 gravity Mid-Continent plus $1.04 per barrel.

Bradford-Allegany—36 gravity Mid-Continent plus $1.39.

Southwest Pennsylvania—36 gravity Mid-Continent plus $1.09.

National Transit Lines-The Pennzoil Co.—36 gravity Mid-Continent plus $1.34.

Buckeye—36 gravity Mid-Continent plus 89 cents.

Note—The above prices are recommended by the South Penn Oil Co. purchasing over 50 per cent of the total Pennsylvania grade crude.

Price Relationship Oklahoma Crude 36 Gravity and Eureka Crude

	Eureka	Oklahoma 36° gr.	Difference
1925	$3.37	$1.87	$1.50
1926	3.36	2.13	1.23
1927	2.75	1.38	1.37
1928	2.91	1.31	1.60
1929	3.52	1.37	2.15
1930	2.24	1.23	1.01
1931	1.55	1.63	.92
1932	1.53	.88	.65
Average	2.65	1.35	1.30

	Bradford	Eureka	Difference
1925	$3.76	$3.37	$.39
1926	3.77	3.36	.41
1927	3.16	2.75	.41
1928	3.36	2.91	.45
1929	3.95	3.52	.43
1930	2.60	2.24	.36
1931	2.02	1.55	.47
1932	1.88	1.53	.35
Average	3.06	2.65	.41

Market price August 31, 1933:

Bradford	$2.25
Eureka	1.87
Difference	$.38

SOMERSET, KENTUCKY
(Ashland Lines, Ashland Refining Co.)

	Average price Somerset	Average 36° gr. Mid-Continent	Average differential
1926	$2.48	$2.13	$.35
1927	1.633	1.38	.25
1928	1.599	1.31	.29
1929	1.695	1.37	.33
1930	1.352	1.23	.12
1931	.897	.63	.27
1932	.952	.88	.07
Sept. 2, 1933.	.87	.64	.23

Five-year average differential, 22 cents; eight-year average, 24 cents.

Note—Recommended 23 cents above 36 gravity Mid-Continent for Somerset, Ky., crude, subject to change with changing conditions. By Ashland Refining Co. purchasing 4,000 bbls. of total 5,500 bbls. daily production.

WESTERN KENTUCKY
(Ohio Oil Co.)

	Average western Kentucky	Av. price 36° gr. Mid-Continent	Average differential
1929	$1.69	$1.37	$.32
1930	1.49	1.23	.26
1931	.77	.63	.14
1932	1.00	.89	.11
1933 (8 mos.).	.62	.45	.17
Sept. 2, 1933.	.82	.64	.18

Average five years, 20 cents.

Note—Recommended 18 cents above 36 degrees Mid-Continent for western Kentucky by Ohio Oil Co. purchasing 2,400 bbls. of total 4,000 bbls. estimated for this grade and area.

LIMA, OHIO
(Ohio Oil Co. Posting)

	Av. price Lima, Ohio	Average 36° gr. Mid-Continent	Average differential
1929	$1.70	$1.37	$.33
1930	1.54	1.23	.31
1931	.90	.63	.27
1932	1.10	.89	.21
1933 (8 mos.).	.75	.45	.30
Sept. 2, 1933.	.95	.64	.31

Average differential five years, 28 cents.

Note—Recommended 31 cents above 36 gravity Mid-Continent for Lima grade by Ohio Oil Co. purchasing 2,400 bbls. daily of total 3,200 bbls. production for this grade.

PRINCETON, SOUTHWEST INDIANA AND ILLINOIS
(Ohio Oil Co. Postings)

	Av. price Princeton and Illinois	Average 36° gr. Mid-Continent	Average differential
1929	$1.65	$1.37	$.28
1930	1.59	1.23	.36
1931	.85	.63	.22
1932	1.05	.89	.16
1933 (8 mos.).	.67	.45	.22
Sept. 2, 1933.	.87	.64	.23

Average differential five years, 25 cents.

Note—Recommended 23 cents above 36 gravity Mid-Continent for Princeton and Illinois by Ohio Oil Co. purchasing 14,000 bbls. daily of this grade (total production).

Corning, Ohio, Oil

Corning grade oil is produced in the southeastern section of Ohio. It is competitive in that territory with Mid-Continent through pipe line and with Pennsylvania oil. It is possible for the principal purchaser of Corning oil to switch his supply with facility between any one of the three. No definite fixed relationship has prevailed at all times between those three grades, largely due to the fact that the market demand and price for the various finished products of these oils vary from time to time to such extent as to materially affect relative demand for the crude.

Under the present existing market conditions, it was recommended that if the base price for Mid-Continent of 36 grav-

CALIFORNIA CRUDE OIL PRICES AT THE WELL

Price per barrel of 42 gallons in fields indicated

(All gravities above those quoted take highest price offered in that field)

Gravity—	Signal Hill	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey*	Olinda, Brea Canyon	Athens-Rosecrans, Dominguez	Elwood Terrace†	Torrance	Richfield
14-14.9	$0.65	$0.65	$0.65	$0.65	$0.65	$0.65	..	....	$0.65	$0.65
15-15.9	.65	.65	.69	.69	.66	.69	....	....	.69	.69
16-16.9	.66	.65	.72	.73	.69	.73	....	....	.73	.74
17-17.9	.70	.65	.76	.77	.73	.74	....	..	.77	.78
18-18.9	.74	.65	.79	.82	.76	.81	....	..	.81	.82
15-19.9	.78	.65	.83	.87	.81	.85	....	..	.84	.86
20-20.9	.82	.68	.87	.91	.85	.90	....	..	.88	.90
21-21.9	.86	.72	.91	.96	.90	.94	....	....	.91	.94
22-22.9	.90	.78	.95	1.01	.95	.98	....	....	.94	.99
23-23.9	.94	.84	.99	1.06	.99	1.02	$0.93	....	.97	1.03
24-24.9	.98	.90	1 03	1.11	1.04	1.06	.96	....	1.00	1.07
25-25.9	1.02	.95	1.07	....	1.08	1.10	1.00	....	1.04	1.11
26-26.9	1.06	1.01	1.10	....	1.13	1.15	1.04	....	1.07	1.15
27-27.9	1.10	1.07	1 14	....	....	1.19	1.07	....	....	1.19
28-28.9	1.14	1.13	1.18	....	....	1.23	1.11	....	....	1.24
29-29.9	1.18	1.18	1.22	....	....	..	1.14	....	....	1.28
30-30.9	1.22	1.24	1.26	....	....	....	1.18	....	....	....
31-31.9	....	....	....	....	....	....	1.22	....	....	....
32-32.9	....	....	....	....	....	....	1.25	....	....	....
33-33.9	....	....	....	....	....	....	....	$1.13	....	....
34-34.9	....	....	....	....	....	....	....	1.16	....	....
35-35.9	....	....	....	....	....	....	....	1.19	....	....
36-36.9	....	....	....	....	....	....	....	1.22	....	....
37-37.9	....	....	....	....	....	....	....	1.25	....	....

*Subject to field gathering charge of 5 cents per barrel. †F.o.b. ship.

Gravity—	Whittier, La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall, McKittrick, Kern River	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills
14-14.9	$0.65	$0.65	$0.65	....	$0.57	$0.57	$0.57	$0.57	$0.57	....
15-15.9	.65	.65	.65	....	.57	.57	.57	.57	.57	....
16-16.9	.68	.65	.65	....	.57	.57	.57	.57	.57	....
17-17.9	.72	.65	.68	....	.57	.57	.57	.57	.57	....
18-18.9	.76	.65	.72	....	.57	.61	.61	.59	.58	....
19-19.9	.80	.65	.76	....	.57	.65	.65	.63	.61	....
20-20.9	.84	.66	.80	....	....	.69	.69	.67	.65	....
21-21.9	.88	.69	.84	$0.73	....	.73	.73	.71	.69	....
22-22.9	.92	.73	.88	.77	....	.78	.78	.75	.73	....
23-23.9	.96	.78	.92	.82	....	.83	.82	.79	.77	....
24-24.9	1.00	.83	.96	.87	....	.88	.87	.83	.81	....
25-25.9	....	.89	1.01	.92	....	.93	.91	.87	.85	....
26-26.9	....	.95	1.05	.97	....	.98	.96	....	....	....
27-27.9	....	....	1.09	1.02	....	1.03	1.01	....	....	....
28-28.9	....	....	1.13	1.07	....	1.08	1.05	....	....	....
29-29.9	....	....	1 17	1.11	....	1.13	1.10	....	....	....
30-30.9	....	....	1.21	1.16	....	1.18	1.14	....	....	....
31-31.9	....	....	1.26	1.21	....	1.23	....	....	....	....
32-32.9	....	....	1.30	1.26	....	1.28	....	....	....	....
33-33.9	....	....	1.34	1.31	....	1.33	....	....	....	$1.03
34-34.9	....	....	1.38	1.36	....	....	....	....	....	1.06
35-35.9	....	....	....	1.41	....	....	....	....	....	1.09
36-36.9	....	....	....	1 46	....	....	....	....	....	1.13
37-37.9	....	....	....	1.50	....	....	....	....	....	1.15
38-38.9	....	....	....	1.55	....	....	....	....	....	1.18
39-39.9	....	....	....	....	....	....	....	....	....	1.21

ity is assumed at $1.11 per barrel, that a fair price for Corning oil would be $1.32. This is approximately the differential which has prevailed recently. A more detailed and careful analysis of the situation would be required for other than a test period.

Michigan Crude (Midland)

The oil in the Midland Field in Michigan is produced from a lime formation and the history has been one in which very large flush wells were discovered periodically which declined at a very rapid rate. This has produced a varying supply of the oil with the consequent difficulties of securing permanent markets. The octane rating of the gasoline obtained from this oil is probably the lowest of any crude produced in the United States, necessitating very high operating costs to make it marketable. The oil is also directly competitive with the Mid-Continent. For reasons above stated its price has not, during the short period of the life of the fields, maintained any fixed relationship to Mid-Continent. At present time it is recommended that on the basis of $1.11 for 36 gravity Mid-Continent oil that the price of this oil should be established at $1.11.

We believe that the present time and for the tentative purposes of this evaluation, that a higher price might have the effect of shutting it out of certain necessary markets in competition with Mid-Continent. We would particularly call attention in this case to the unusual number of variables and uncertain factors that have to be taken into account and emphasize that this recommendation is on a purely tentative basis.

Petroleum Products

On the basis of $1.11 per barrel for 36 gravity Mid-Continent crude oil, the following minimum prices for various products will be established for various districts, as set forth below.

In respect to gasoline, differentials shall be established for various octane grades, as follows:

60-64.9 octane equal X.

65-70 octane equals X plus $.005 per gallon.

50-59.9 octane equals X minus $.005 per gallon.

Below 50 octane equals X minus $.01 per gallon.

(Octane ratings based on A.S.T.M., D357-33 T. rating.)

Mid-Continent Area

60-64.9 octane gasoline 6½ cents per gallon.

42-44 gravity w.w. kerosene 4¾ cents per gallon.

41-43 gravity w.w. kerosene 4½ cents per gallon.

38-40 gravity furnace distillate, light straw color, 3½ cents per gallon.

32-36 gravity zero gas oil, 3 cents per gallon.

14-18 gravity fuel oil, 66 cents per barrel.

18-22 gravity fuel oil, 71 cents per barrel.

22-26 gravity fuel oil, 73½ cents per barrel.

The Mid-Continent area as the term used herein, is described as the States of Louisiana, Texas, Oklahoma, Kansas and Arkansas, with the exceptions only of tidewater refineries located on the Gulf Coast of Louisiana and Texas.

For shipment to all destinations within the following States: Kansas, Nebraska, South Dakota, North Dakota, Minnesota, Iowa, Missouri, Illinois, Wisconsin, Michigan and Indiana, the above minimum prices, plus full Group 3 rate of rail freight, shall apply irrespective of point of origin.

At refineries in the St. Louis and Chicago sectors, the minimums specified above shall not apply to shipments of fuel oils of below 14 gravity.

Gulf Ports

60-64.9 octane gasoline, f.o.b. tanker 6½ cents per gallon; f.o.b. tank car, 6¾ cents per gallon.

Kerosene, f.o.b. tanker, 5¼ cents per gallon; f.o.b. tank car, 5½ cents per gallon.

Gas oil, f.o.b. tanker, 3¾ cents per gallon; f.o.b. tank cars, 4 cents per gallon.

On deliveries of gas oil below 30 gravity, the minimum price hereinabove specified for gas oil will be reduced one-eighth cent per gallon for both modes of delivery.

Bunker fuel, f.o.b. tanker, 79 cents per barrel; f.o.b. tank car, 84 cents per barrel.

Eastern Seaboard

For shipments from the Eastern Seaboard (New York, Philadelphia and Baltimore):

60-64.9 octane gasoline, f.o.b. terminal or barge, 7¼ cents per gallon; f.o.b. tank cars, 7½ cents per gallon.

Kerosene, f.o.b. terminal or barge, 6 cents per gallon; f.o.b. tank car, 6¼ cents per gallon.

Gas oil, f.o.b. terminal or barge, 4½ cents per gallon; f.o.b. tank car, 4¾ cents per gallon.

For shipments of gas oil below 30 gravity, the above prices will be reduced one-eighth cent per gallon for both modes of delivery.

Bunker fuel, f.o.b. terminal or refinery, $1.05 per barrel.

The actual differentials from ocean transportation shall govern for ports north of New York and south of Hatteras, based on a 21-cent per barrel Gulf to New York rate. It is understood that the full barge and lighterage rates from refinery or terminal shipping points shall be added to the above minimums for delivery where barge or lightherage movements are involved, and shall establish the minimum prices at such points.

Western Pennsylvania, Western New York, and Western West Virginia

In the area in the western parts of the above mentioned States where the rail freight from Baltimore, Philadelphia or New York on gasoline, kerosene and light distillates is in excess of 1.5 cents per gallon, the minimum delivered tank car prices of gasoline, kerosene and light distillates shall be the minimum prices f.o.b. tank cars at Atlantic Seaboard points, plus 1.5 cents per gallon.

Ohio

Throughout the State of Ohio, the minimum tank car prices of gasoline, kerosene and light distillates delivered at destinations shall be the minimum prices at Mid-Continent refineries for similar commodities plus an arbitrary addition of 3 cents per gallon.

No minimum prices are established with respect to fuel oils below 24 gravity.

Michigan

The minimum delivered tank car prices for gasoline, kerosene and light distillates in Michigan shall be whichever is the lower under the following two bases:

(a) The delivered price in Ohio, plus the rail freight from Toledo, Ohio, to destinations in Michigan; or

(b) The minimum prices for Mid-Continent refineries plus the full rail freight to destinations in Michigan.

No minimum prices are established with respect to fuel oil of less than 24 gravity.

PACIFIC COAST

60-64.9 octane gasoline, f.o.b. tanker, 7½ cents per gallon; f.o.b. tank car, 7¾ cents per gallon.

Engine distillate, f.o.b. tanker, 7 cents per gallon; f.o.b. tank car, 7¼ cents per gallon.

Kerosene, f.o.b. tanker, 6¼ cents per gallon; f.o.b. tank car, 6½ cents per gallon.

14 plus gravity fuel oil, f.o.b. San Pedro, 85 cents per barrel, barge, dock or tank car.

Diesel oil, f.o.b. San Pedro, $1.15 per barrel, barge and dock. Eleven cents per barrel to be added for tank car and plant delivery. At other points add barge costs.

Wherever no f.o.b. point is specified in this sector it shall be understood to mean f.o.b. Los Angeles Basin refineries.

One-half cent per gallon above San Pedro for San Francisco delivery on gasoline, engine distillate and kerosene, and 1 cent above San Pedro for delivery to Portland and Puget Sound ports.

Fuel oil and Diesel oil at San Francisco, 4 cents per barrel above San Pedro.

General

For shipments into the interior from seaboard terminals or refineries, the established minimum tank car price applicable plus the rail freight to destination shall establish the minimum tank car price for each of the various products, with the exception of areas herein before described.

For shipments to all destinations and not specificially named hereinbefore the following basis for any and all modes of delivery shall govern: The minimum tank car prices specified for the Mid-Continent area, Gulf ports, Eastern seaboard, and Pacific Coast plus full rail rate of freight to destination whichever is lower shall apply.

For the purpose of establishing minimum differentials for the test period on gasoline tank car prices laid down at destination and the net price to the consumer at retail outlets, the following shall apply:

On gasoline within the octane range of below 50 to 59.9, inclusive, the total differential shall be not less than 5½ cents per gallon, of which 3 cents per gallon shall be the minimum allowance to the retail dealer.

On gasolines within the octane range of 60 to 70, inclusive, the total differential shall be not less than 6½ cents per gallon, of which 4 cents per gallon shall be the minimum allowance to the retail dealer.

These minimum differentials shall apply to all sales to consumers at retail outlets.

In region No. 5 (Colorado, Wyoming, Montana and Utah) the minimum tank car delivered prices of refined petroleum products shall be Group 3 prices plus freight or Los Angeles or Portland prices plus freight, whichever is lower; provided, however, refineries so located in said states as to enjoy lower transportation rates to points in said states may reduce such minimum delivered prices for gasoline in an amount not exceeding 1¼ cents per gallon in as much as a considerable percentage of the refined products manufactured in said states must be marketed at an adverse transportation differential.

The following schedule on differentials for the states mentioned is adopted specifically for the states in which the general schedule for differentials previously recommended does not apply. These states are: Washington, Oregon, Idaho, Utah, Nevada, California, Arizona and New Mexico, Alaska and Hawaiian Islands. The schedule: To base tank car prices on 60-70 octane, add: For wholesale deliveries into tank trucks and/or trailers, 1 cent.

Deliveries into customers' storage by tank truck, 3½ cents.

Retail deliveries through service stations, garages, etc., 6½ cents.

Dealers handling gasoline of one company exclusively to receive 1-cent allowance from tank truck prices.

To base tank car prices on 50-59.9 octane add:

For wholesale deliveries into tank trucks and/or trailers, 1 cent.

Delivered into customer's storage by tank truck, 3½ cents.

Retail deliveries through service stations, garages, etc., 5½ cents.

Exclusive dealers, 1 cent allowance off tank truck price.

Eight Wildcats Drilling Simultaneously in Louise Area

Night scene of Louise area in Wharton County, Texas. No commercial production has been opened and all tests shown are wildcats. All are being drilled by Pure Oil Co. in one of the most unusual wildcat development projects on record, and in which eight wildcats, all within a radius of 2 miles, are being drilled simultaneously. Two of the tests were shut down temporarily when the picture was taken, and, not being lighted, are not visible. The story on this project was printed in a recent issue of The Oil and Gas Journal.

Labor Policy Board Is to Be Named by Ickes

Creation of a Labor Policy Board in the oil administration, recommended by the Planning and Co-ordinating Committee of the oil industry, has been approved by Secretary Ickes.

This board will consult with the administrator and the Planning and Coordinating Committee to aid in determining the many basic questions of principle and interpretation affecting labor which must be decided within a short time. The new board will make a general study of the labor situation in the industry to assure labor a full realization of the advantages provided by the code. It will determine the most practicable method of investigation in dealing with complaints of violations of labor provisions to insure successful enforcement of the code.

The Labor Policy Board will advise the Petroleum Administrative Board, already organized within the Department of the Interior by the secretary to advise him and to carry out the functions specifically placed in the department by the petroleum code.

CUT TEXAS' ALLOWABLE

AUSTIN, Tex., Oct. 17.—The Texas Railroad Commission today entered an order fixing state allowable oil production at 957,555 bbls., or 7,445 bbls. below the quota set by the Federal oil authority. The East Texas Field was allowed 466,368 bbls.

Financial Condition of the Oil Industry Justifies Better Prices for Crude Oil and Its Products

By C. O. WILLSON

The justification of the recent advances in quotations for crude oil and refinery products and the necessity of still higher price levels are apparent in any study of financial reports covering the oil industry. Despite a popular opinion to the contrary the oil business even during normal periods in recent years has not been as prosperous as other major industries whose operations also have expanded rapidly due to a wider consumer demand for their products.

The occasional "strike" of the individual or small company whose operations are largely speculative has served to obscure in the public mind the condition that has actually existed in regard to the meager profits and losses of a large majority of companies whose routine operations constitute the oil industry. These operations represent billions of dollars in expenditures over a period of years by hundreds of thousands of investors and their rewards in the form of dividends and enhanced value of holdings in recent years usually have been conspicuous by their absence.

A steady decline in the prices received for crude oil and refinery products over the past few years, has been reflected in revenues of individual companies, although the necessity of enlarging facilities to take care of a rapidly increasing number of consumers, coupled with improved quality of products, has meant larger and larger capital expenditures. To cope with declining prices, individual companies have reduced costs through various innovations in operating efficiency reflecting remarkable progress along technical lines. Despite this fact conditions brought about largely by uncontrolled production of raw material have dominated the industry and the operating unit which has been able to secure an adequate return on its investment has been the exception.

In the accompanying table the invested capital, net profit and per cent earned on invested capital of 20 of the largest oil units in the United States are shown. It is safe to state that these companies represent in excess of 75 per cent of the invested capital in the oil business. The operations of all the 20 companies listed are integrated, the capital being invested in the producing, refining, transportation and marketing—the four main divisions of oil operations. All of these four divisions must be considered in any fair analysis of the earnings of the oil industry. Occasionally a smaller unit which is engaged in only one or two of these divisions is able to show substantial profits due either to unusual price conditions or operating positions that from time to time develop in the oil business. These same developments may bring large losses to other small units engaged in some other division of the oil industry. The major and semimajor companies have endeavored to protect themselves in this constantly shifting condition within the industry by having their operations cover all phases of the petroleum industry. Due to that fact their profits or losses from time to time reflect actual conditions for the entire industry.

Profits Cover Fixed Charges

The data for 1932 and 1931 are of special interest in showing the plight of the industry in regard to profits. It will be noted in the table that the 20 companies showed a net loss of $20,500,000 in 1931 with a net profit of $119,990,000 the following year which means a net profit of approximately $100,000,000 for two years.

This net profit figure should not be confused with net income. The latter is the amount available to common and preferred stockholders and is determined by subtracting the fixed charges from the net profit. The fixed charges of the 20 companies listed in the table are approximately $50,000,000 yearly or $100,000,000 for 1931 and 1932. In other words these 20 companies considered as a unit just met their fixed charges which means no earnings for their hundred of thousands of preferred and common stockholders.

First Half of 1933

The record for the first six months of this year is not shown in the table for the reason that several of the companies listed do not issue quarterly earning statements. The available reports show that the slump of prices the first half of this year resulted in losses on invested capital which were greater than any similar period since production of crude oil and the manufacture and marketing of refinery products became a major industry. Some of the reported losses this year are as follows: Barnsdall, six months, $1,835,000; Continental, six months, $4,900,000; Mid-Continent, six months, $2,703,000; Ohio Oil, six months, $4,008,000; Shell-Union, first quarter, $9,239,000, and Skelly, first quarter, $1,182,000. The operations of these companies are sufficiently representative to indicate that the low prices that prevailed for crude oil and refinery products over the first half of the year, if they had continued, would have meant ruinous losses for the year. In this connection it is pointed out that although the recovery in prices of the past few months is aiding the industry, it is certain 1933 will be an unsatisfactory year from the standpoint of earnings due to the heavy losses of the first six months.

TABLE SHOWING INVESTED CAPITAL AND NET PROFITS OF 20 OF THE LARGEST OIL COMPANIES IN UNITED STATES, 1930-32

	Invested capital	Net profit	Per cent earned on invested capital
Atlantic Ref. Co.			
1932	$152,250,000	$4,730,000	3.1
1931	153,450,000	1,730,000	1.1
1930	155,100,000	3,490,000	2.2
Barnsdall Oil Corp.			
1932	24,080,000	*700,000	*2.9
1931	58,140,000	*3,160,000	*5.4
1930	62,580,000	5,180,000	8.3
Consol. Oil Corp.			
1932	331,440,000	5,260,000	1.6
1931	338,280,000	*17,370,000	*5.2
1930	376,450,000	25,750,000	8.0
Continental Oil Co.			
1932	82,750,000	*880,000	*1.1
1931	148,180,000	*10,940,000	*7 4
1930	171,710,000	2,170,000	1.3
Gulf Oil Corp.			
1932	421,390,000	8,950,000	1.7
1931	434,370,000	*16,590,0 0	*3.8
1930	466,150,000	15,980,000	3.4
Mid-Continent Pet.			
1932	70,290,000	*2,080,000	*3.0
1931	72,290,000	*4,960,000	*6.9
1930	79,190,000	1,490,000	1.9
Ohio Oil Co.			
1932	175,650,000	7,250,000	4.1
1931	175,110,000	*5,170,000	*2 9
1930	208,920,000	11,080,000	5.3
Phillips Pet. Co.			
1932	165,750,000	3,360,000	2.0
1931	182,480,000	*2,420,000	*1.3
1930	193,660,000	5,260,000	2.7
Pure Oil Co.			
1932	128,640,000	2,290,000	1.8
1931	200,050,000	2,740,000	1.4
1930	203,930,000	5,020,000	2.5
Shell Union Oil Co.			
1932	372,020,000	5,950,000	1.6
1931	403,250,000	*20,610,000	*5.1
1930	442,730,000	1,440,000	.3
Skelly Oil Co.			
1932	42,670,000	50,000	.1
1931	47,100,000	*1,280,000	*2.7
1930	63,850,000	2,900,000	4.5
Socony-Vacuum			
1932	942,480,000	9,620,000	1.0
1931	979,660,000	340,000	.0
1930	896,520,000	41,550,000	4.5
Standard (Calif.)			
1932	569,180,000	14,010,000	2.5
1931	581,260,000	14,560,000	2.5
1930	597,950,000	37,670,000	6.3
Standard (Ind.)			
1932	663,100,000	19,570,000	3.0
1931	718,970,0 0	21,270,000	3.0
1930	733,910,000	51,130,000	6.9
Standard (N. J.)			
1932	1,464,140,000	10,130,000	.7
1931	1,498,150,000	18,060,000	1.2
1930	1,432,730,000	51,050,000	3.6
Standard (Ohio)			
1932	48,860,000	*1,210,000	*2.5
1931	52,310,000	2,360,000	4.5
1930	42,890,000	3,720,000	8.7
Sun Oil Co.			
1932	87,720,000	5,130,000	5 9
1931	86,210,000	3,810,000	4.4
1930	81,570,000	8,490,000	10.4
The Texas Corp.			
1932	484,470,000	4,950,000	1.0
1931	514,890,000	*3,210,000	*0.6
1930	548,430,000	21,740,000	4.0
Tide Water-Asso'd			
1932	230,320,000	9,800,000	4.3
1931	213,860,000	*3,990,000	*1.9
1930	230,320,000	9,800,000	4.3
Union Oil Co.			
1932	191,930,000	4,810,000	2.5
1931	197,220,0 0	4,730,000	2.4
1930	214,480,000	11,230,000	5.2
TOTAL all companies:			
1932	$6,299,110,000	$119,990,000	1.9
1931	7,055,530,000	*20,500,000	*.3
1930	7,103,160,000	316,140,000	4.4

*Decrease.

Capital Losses

In addition to current earnings there is another angle to this period of low prices of direct importance to investors which no doubt will continue to have significance for an indefinite period. It will be noted in the table that the invested capital of the 20 companies decreased approximately $900,000,000 between the 1930 and the 1932 reports. This is due to a revision of the capital structure of several companies made necessary by changed conditions in the oil industry. A steady decline in prices in effect has made worthless or greatly reduced the earning power of many oil properties for which large capital sums were expended during more normal times in the oil business. This is particularly true in the producing division. Settled producing properties which gave satisfactory returns when the posted prices for crude oil were from $1.25 to $1.50 per barrel at the wells become liabilities rather than assets when oil dropped under $1 per barrel. Several companies have seen fit to reflect this condition in a revamped capital structure. Whether this is done or not, this change in basic conditions means a large permanent loss to investors which usually is not directly reflected in current earning reports.

Previous Earnings

The oil business cannot rely on large earnings in pre-depression years to carry it through the lean periods of the past two or three years. Several other industries have been more fortunate in this regard. The Standard Trade and Securities, published by the Standard Statistics Company, Inc., in a report published in 1931 gave the invested capital and per cent earned of 33 leading oil companies. This report covered all the companies listed in the accompanying table including some of their subsidiary units. There were in addition several companies of the semimajor class. This report for the 33 companies summarized, follows:

Year—	Invested capital	Per cent earned
1927	$6,454,770,000	5.4
1928	6,840,860,000	9.2
1929	7,707,570,000	9.2
1930	8,019,710,000	4.7

The 1927, 1928, and 1929 years cover the boom period of industry in the United States and for the three years the net profit of the oil industry was less than 8 per cent on its invested capital. In any industry which has been forced to expand as rapidly as the oil business to take care of consumer demands and with all the hazardous phases of operations which must be passed to the investors, it is conceded in financial circles that this net profit

(Continued on Page 31)

New Catalytic Processes for the Production of Motor Fuels Having High Octane Value

There have recently been brought to commercial development two entirely new catalytic processes, one for the production of high octane gasoline, and the other for the refining of gasoline made by any process. The principles involved and the practical advantages offered are such as to command the keen interest of both technologists and executives.

The material for this article, which is the first publication to be made, was furnished through the courtesy of Dr. W. F. Faragher, who has been closely associated with the processes for the last two years. This issue will deal only with the production of gasoline. The treating process will be covered later.

The laboratory work on catalysts started in France in 1923, and covered seven years of intesive research. The semicommercial development on petroleum, which is the joint accomplishment of a group of engineers headed by Eugene Houdry, was made in this country starting in November, 1930.

TABLE 1—TYPICAL RESULTS FROM VARIOUS CHARGING STOCKS

Charging stock—	A.P.I. grav.	11 pounds Reid vapor pressure 400° E.P. gaso., % by volume	Residual oil % By volume	Residual oil A.P.I. gravity	Residual oil Carbon residue	Lean gas, % by wt.	Octane No. C.F.R. Motor Method
Penn. gas oil	39.5	72.6	9.6	25.9	0 11	20.1	75
Mid-Continent gas oil.	35.4	67.0	22.0	26.6	0.06	13 1	79
Coastal fuel oil	30.1	71.0	15.2	18.8	0.11	13.2	83
W. Tex. gas oil (1.088% total sulphur)	31.7	*62 1	20.2	19.2	0.13	15.3	80 5

*Total sulphur, 0.08 per cent.

Apart from points of scientific interest, which will receive separate treatment, the outstanding features of the Houdry process are a gasoline of a higher octane number than it has hitherto been possible to make commercially from petroleum; a cost of production materially lower than by present methods; a residual oil which is always a clean stock of gas-oil boiling range; and the simultaneous use of moderate temperatures and pressures only slightly above atmospheric.

High Octane Value

The octane number of the gasoline, as determined by the C.F.R. Motor Method, varies from 75, when running Pennsylvania fuel oil, to 85 with coastal distillate. The untreated gasoline is unusually low in gum and sulphur content and has an exceptionally high oxygen bomb stability.

The residual oil is never a tarlike product, irrespective of the yield of gasoline or the nature of the charging stock. It has the properties of a good Diesel fuel or a No. 2 domestic fuel oil. The unusual character of this residual oil contributes in a large degree to the favorable economics.

The process has been successfully applied to a wide range of petroleum distillates which vaporize in the temperature range of 775° to 875° Fahrenheit. It may be employed in two ways. The charging stock may be run to a yield equal to or somewhat higher than that of liquid-phase thermal cracking, or it may be run to a yield of 35 to 50 per cent, depending upon the stock, and the residual oil cracked in a conventional thermal plant. The latter method will no doubt appeal to refiners having modern cracking equipment, as the installation cost is considerably lower and the combination gives a large increase of gasoline, the octane number of the blend is raised several points, and the amount of residual fuel oil from the thermal plant is reduced to about one-third that of ordinary practice.

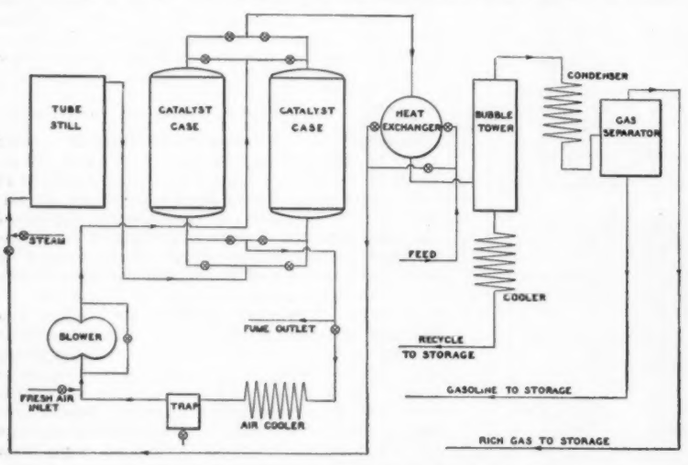


Fig. 1. Typical flow chart of Houdry process

Catalytic processes are well known and used in the chemical field. Many attempts have been made to apply them in the petroleum industry but serious obstacles have prevented their being used with success. In general, the activity of the catalyst was rapidly lowered through fouling by the reaction and no satisfactory method existed for restoring the activity.

In the Houdry process a catalyst of high activity is used. As soon as the activity is lowered to a predetermined degree, its original activity is restored by a regenerating operation which completely removes all deposits. This operation, which is performed without removing the catalyst, is simple and safe and involves only the manipulation of a few valves. Temperatures are controlled uniformly throughout the mass and within a close range.

It has been established that the production of gasoline in the Houdry process is accomplished by catalytic action only. This is also evidenced by the products themselves, gasoline, residual oil, and gas, which are quite different in their molecular structure from corresponding products of other processes.

Standard Equipment

A Houdry plant embodies standard refinery equipment, except for the catalyst cases and regenerating system. The only important difference from the usual cracking plant is that the catalyst cases are substituted for the reaction chamber. The typical operations involved are:

1. Vaporization of the petroleum oil with a small quantity of steam, in the temperature range of 775° to 875° F. and at substantially atmospheric pressure. Cracking must be limited during the vaporization to the extent usually effected in good topping still operation.
2. Passing the mixture of oil vapor and steam at the specified temperatures and pressures over molded, solid catalyst contained in cylindrical steel cases, which are provided with a system for regenerating the catalyst in place.
3. Separating the converted product from the catalyst case into gasoline and recycle oil in a bubble tower.
4. Removing the recycle oil to a run-down tank and the gasoline, steam and fixed gas to a condenser and separator.
5. Recovering gasoline from the fixed gas by conventional methods.

Heat exchange is used in the most advantageous way.

The catalytic action is gradually decreased by a deposit of carbonaceous material. It is used, therefore, for only a limited time before the stream of oil vapor and steam is switched to another case containing regenerated catalyst. The fouled catalyst is steamed to remove oil vapor and is then regenerated by air mixed with the products of combustion from the catalyst case. This stream of regenerating medium is circulated through the catalyst case by suitable blowers. The heat of combustion is carried away by the stream leaving the case, and the sensible heat is utilized in a waste-heat boiler. The regenerating medium enters the case at 150° F. and leaves at a temperature of 1,000° F. This range of temperatures is suitable for complete elimination of the sulphur and carbonaceous material deposited on the catalyst, and is still well below the temperature at which the catalyst would be depreciated in activity. Continuous operation is secured by providing catalyst cases which are on stream while the others are in regeneration.

The pipe still, which is a vaporizing unit only, will determine the operating cycle. It is certain that a time efficiency of 95 per cent will be realized.

Recycle oils are put through the unit in separate operations, since successive recycles require differing conditions for the best results.

Typical results from various charging stocks are given in Table 1. The general method of operation is indicated by the flow chart, Figure 1.

The combination of the Houdry process with existing thermal cracking plants offers important advantages. For example, a Mid-Continent gas-oil was first run through a Houdry unit and 37 per cent of gasoline of 76.5 (C.F.R. Motor Method) octane number produced. The residual oil, amounting to 56 per cent by volume, was practically as good a charging stock for a thermal cracking unit as the virgin stock. The Houdry residue was then cracked in a thermal plant with a yield of 63.8 per cent of gasoline of 68.5 (C.F.R. Motor Method) octane number, making a combined yield of 73 per cent of gasoline of 72.6 (C.F.R. Motor Method) octane number, 400° F. endpoint and 11 pounds Reid vapor pressure. In the combined operation there

(Continued on Page 31)

Fig. 2. Feed pump and charging tanks; heating tubes overhead in center; two catalyst cases overhead at rear; condensers and receivers below catalyst cases. Preheater control panel and teperature recorders on wall in the center. Charging rate 0.25—1.0 gal. per hour

Traditional Oil Boom Scenery Absent at Greta; Development Proceeding in Orderly Fashion

By NEIL WILLIAMS
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Oct. 16.—Although going on its sixth month and now experiencing the most active drilling development on the Gulf Coast, the Greta Field of Refugio County so far has escaped the rush of a boom so characteristic of fields of that type. To one coming into the field, the absence of the mushroom town with its overnight growth of long streets of shacks, tent camps, shops and "joints" is very conspicuous. The floaters and the hangers-on who usually flock to such places are not present. Supply row, with its line of equipment stores, machine shops and the like, is missing. Only one such store has been put in. Even the operators themselves have been slow to provide the customary field offices and camps for employes.

From this angle, Greta has reached its present status of major importance with possibly as little display of attention as any other field on the coast. Still it continues its steady expansion, with the number of operations on the increase and the completion of wells becoming more and more frequent. On October 14 there were 37 producing wells in the field and approximately 30 rigs were running. As yet the immediate limits of the field have not been determined on any side, and on the west, southwest and north there are no outposts at all and none of the wells shows any signs of the field playing out in those directions. The recent completion of a well in a deep sand at 5,900 feet opens possibilities of additional important development besides that in the regular 4,400-foot pay.

Field Facilities

Operators, of whom there are approximately 15 active in the field, are only now beginning to provide office and camp and warehouse facilities in the field. Edwin M. Jones, of San Antonio, is completing a modern camp on a tract in the present southeastern portion of the field. Floboots Oil Corp., which is associated with the Moody-Seagraves interests, has just recently built an office and camp facilities on its O'Brien "B" lease in the Peoples Survey at the present extreme northeast end of the field. Southwest Oil Corp., which until recently has shared field office quarters with the Greta Oil Corp., has recently completed a combination field office and warehouse on a lease it owns in the extreme southeast part of the field in the N. S. Crunk Survey. Greta Oil Corp., the discoverer of the field, has had its office and warehouse building since early in the field's development, this being located on the discovery well lease. Texas Gulf Producing Co. is starting construction of a camp and office in the north part of the field.

No other operating companies have field offices at Greta. The majority of these are located in the town of Refugio, which is 10 miles south of Greta. For the time being Humble Oil & Refining Co. will handle its operations from its office and camp at its O'Connor Field, 14 miles north.

As for equipment houses, Wilson Supply Co. is the only one so far which has established a store in the field, this being located on the paved road directly across the right of way from Greta Oil Corp.'s field office. Other supply companies already were well established at Refugio, where they located during the Refugio boom, and have not found it necessary to have additional facilities at Greta as the distance is only 10 miles by paved highway. Heard & Heard, teaming contractors at Refugio, however, have established yards at Greta.

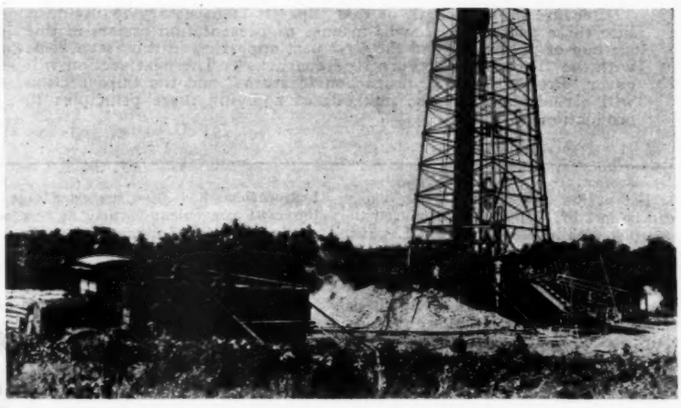
The accessibility of Refugio where living and business facilities are readily available, has discouraged the establishment of camps and other facilities at Greta. The fact that practically all the fee ownership of the land at Greta is in the hands of one family has prevented influx of the usual oil field following.

Pipe Line Projects

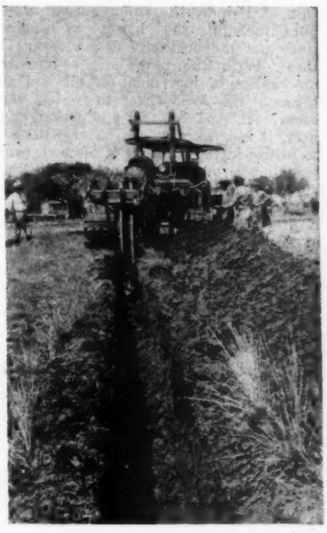
The Texas Pipe Line Co. now is rushing completion of its 6-inch line out of the field to Refugio where it will tie into Humble Pipe Line Co.'s line to tidewater at Ingleside. The former company has acquired the pumping station built by the Blanco Oil Co. for loading rack use and has remodeled it for service as the field station for its new line. It also is building a new field office building.

Atlantic Pipe Line Co. also is completing its pumping station in the field and has erected storage facilities. This station has been in operation pumping oil to Refugio, where the company has a large station and tank farm handling oil to tidewater at Aransas Pass.

Other new work which has been done includes the grading of a good road off the paved highway from the camp of Edwin Jones to the latter operator's "A" O'Brien lease on the southeast side of the field. Additional road building probably will be undertaken shortly. The absence of roads over the field was felt during the recent rainy spell when travel was impossible off the paved highway.



Running last joint of casing in a Greta well with cementing truck ready for cementing the pipe. The derrick foundation and rig set-up shown is typical for the field



Ditching work under way in Greta Field for new 6-inch line being laid by the Texas Pipe Line Co.

the only road through that area. Before the development of the field, the land was nothing but a large cattle range and the only roads have been paths beaten by hauling and traffic to the various leases.

Development in the field continues in a most orderly fashion. Very little attempt is being made by any of the operators to step off very far from the field to bring in new territory and extensions are marked only by steady expansion of the producing limits. Drilling is being curtailed to a minimum, being limited to one well to 20 acres.

Acreage Proration

Effective October 7, the first production restrictions were placed on the field

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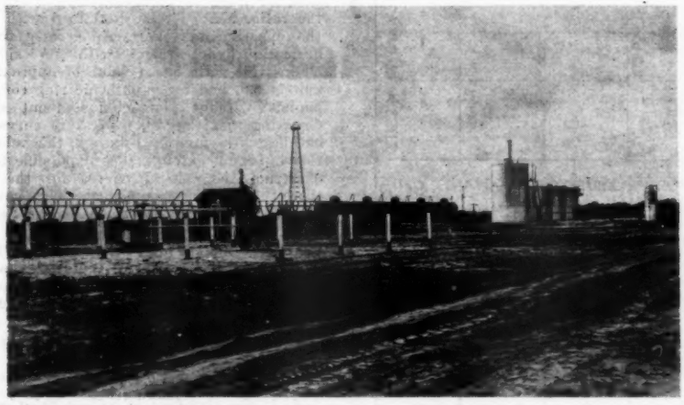


Completed well, tanks and separator on Southwest Oil Corp.'s "A" O'Brien lease. This is typical of the neatness with which the majority of leases in the Greta Field are kept. Loading rack and gauger's house in background

Crater of Greta Oil Corp.'s No. 2-A O'Brien, which blew out early in the development of the Greta Field. Such a disaster as this is a constant reminder of the ever present hazard of high pressure gas sands at Greta

Properties of Hydrocarbon Mixtures as Related to Some Production Engineering Problems

By W. K. LEWIS*

Of Value to Producers and Refiners

The accompanying article by Dr. W. K. Lewis, head of the Department of Chemical Engineering of the Massachusetts Institute of Technology, Cambridge, Mass., should be of value to readers of The Oil and Gas Journal interested in either the refining or production department. The paper was presented before the Dallas meeting of the Petroleum Division of the A. I. M. E. and many requests were made for copies. It is the first time that these data have been released in this form and the complete paper will be reproduced in The Oil and Gas Journal with all charts and graphs.

Because of the length of this paper it is necessary to divide it into three parts. Dr. Lewis' manner of presentation assists in this method of publishing and the first part appearing in this issue deals with the "Properties of Pure Hydrocarbons". The next section will cover "Properties of Hydrocarbon Mixtures" and the third section will give illustrations of methods of applying these principles to production problems.

During the last decade the petroleum refinery engineer has made great progress in achieving a better understanding of the physical behavior of hydrocarbon mixtures, with particular reference to their pressure-temperature-volume relationships, the mechanism of the evaporation of liquids, the condensation of vapors, including the changes in composition, and the heat effects accompanying them. With the new insight into the mechanism of movement of oil and gas through the formations in which they occur, achieved by the production engineer, it is clear that the latter will need to utilize in the solution of his own problems much of the information outlined above. It is the purpose of this paper to outline those portions of that information which seem most certain to prove of importance in production work.

Properties of Pure Hydrocarbons

While it is true that petroleum always consists of highly complex mixtures of hydrocarbons, none the less understanding of the behavior of the mixture must be based upon a knowledge of the properties of the pure components. However, in view of the tremendous number of hydrocarbons existing in petroleum, the determination and formulation of the properties of all of them would seem a discouraging task. The difficulty of the situation is increased by the undoubted fact that the overwhelming majority of chemical individuals in petroleum have never been isolated as pure compounds, none of their physical properties have been determined and even their chemical constitution is unknown.

The situation would be hopeless were it not for the fact that certain extraordinary correlations of important properties of various hydrocarbons have been discovered which make it possible to predict those properties for a given chemical individual on the basis of a very limited characterization of it. Thus, one can predict the vapor pressure curve of an unknown hydrocarbon over a considerable range from the knowledge of a single point on that curve, with no other information whatsoever as to the nature of the hydrocarbon; if, in addition to this one point, one knows the molecular weight and the density of the hydrocarbon, one can estimate the whole vapor pressure curve with reasonable precision from these three bits of information and nothing else. Indeed, it is not impossible that a knowledge of three characteristics of an unknown hydrocarbon, properly chosen, may turn out to be sufficient to determine all its more important physical properties. Clearly therefore one must start with a knowledge of the properties of individual hydrocarbons, interpreted and generalized in the light of these correlations.

It must be emphasized that these correlations are not absolute. They are approximations only. However, many of them are remarkably close, almost always amply within the requirements of engineering work and in some cases probably better than the accuracy of the best existing data.

Vapor Pressures

The vapor pressures of all hydrocarbons rise rapidly with increase in temperature, so rapidly that upon plotting them on ordinary co-ordinate paper interpolation is inaccurate and all precision is lost at low pressures. This difficulty can be met by the use of a semilogarithmic plot such as that of Figure 1, which shows the vapor pressure curve of n-octane. On this curve are indicated the data points of individual investigators, so that the correlation between their results is immediately apparent. All vapor pressure data are of this general type and are probably best presented in this or some equivalent way.

Numerous methods of correlation of the vapor pressure relationships of various hydrocarbons have been suggested. One of the most convenient is that of Cox, or one of its modifications, as shown in Figure 2. The pressure scale is logarithmic and the temperature scale arbitrarily drawn. It is found that on such a chart the vapor pressure curves of all pure hydrocarbons plot as substantially straight lines, converging to a common point. Consequently, a single point on the vapor pressure curve of a hydrocarbon, such as its boiling point at atmospheric pressure, or at any other known pressure, enables one to construct the complete curve for the hydrocarbon in question. There is no doubt that this correlation is not perfect. The lines for individual hydrocarbons are certainly not always straight. Indeed the vapor pressure curves of some hydrocarbons cross each other, a fact incompatible with the chart. Furthermore, there are more dependable correlations, but these are also more complicated and since it is uncertain that they are more dependable when extrapolated to higher hydrocarbons, direct data on which are nonexistent, Figure 2 is perhaps preferable for engineering work.

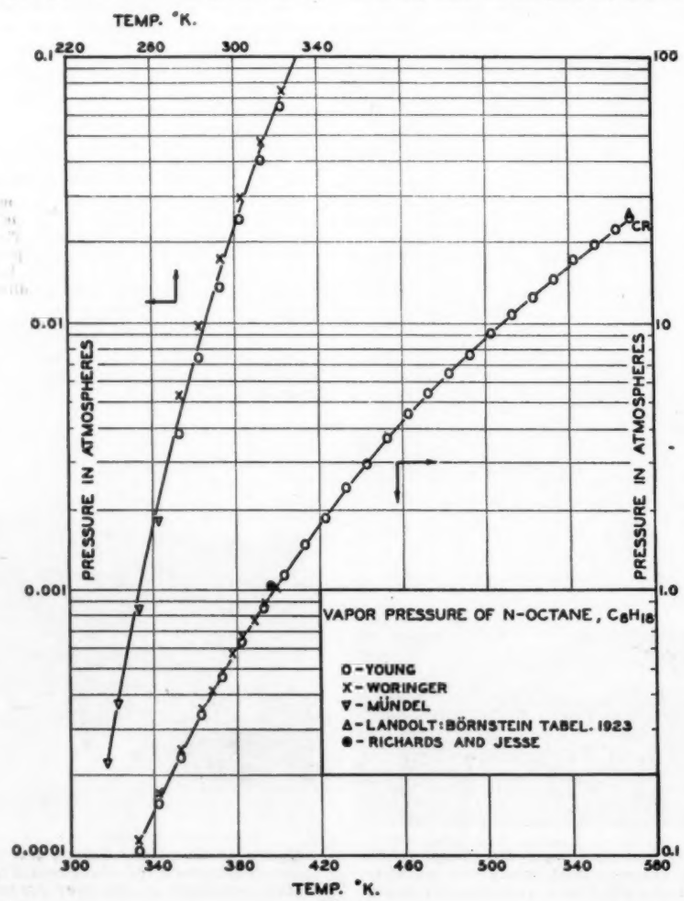


Fig. 1

Critical Conditions

When hydrocarbon liquids are heated they expand. However, the vapor pressure increases rapidly and, on account of this fact, despite the rise in temperature, the density of the saturated vapor in equilibrium with the liquid increases. Finally, a point is reached at which the densities of liquid and of saturated vapor become identical and differences in physical properties disappear. This is called the critical point of the material in question, the temperature being the critical temperature, T_c, the pressure, the critical pressure, P_c, and the volume, the critical sure, v_c. The critical temperature and pressure, as shown for octane at the right hand end of the curve of Figure 1, marked Cr.

The correlations of critical conditions are somewhat less satisfactory than those of vapor pressures. However, the value of the so-called critial ratio, RT_c/P_cV_c, is remarkably constant for all hydrocarbons investigated. Its average is about 3.79. For hydrocarbons with less than 4 carbon atoms per molecule the value is definitely lower, being about 3.59 for ethylene and ethane, and 3.46 for methane. However, for hydrocarbons with 4 carbon atoms and above per molecule, the deviations apparently never lie outside the range 3.7-3.85, a variation from the mean of only 2 per cent. While it is true that within this range the values for paraffin hydrocarbons average high and those for the aromatics low, it seems allowable until more accurate data are available, to use the average figure, 3.79, for the critical ratio. It has also been shown that at the critical point the density of all paraffin hydrocarbons containing more than 3 carbon atoms per molecule on which data is available is practically the same, 0.236. It is readily shown that this is equivalent to the statement that for these hydrocarbons the value of the ratio, MP_c/T_c, is equal to 5 within the experimental error. Apparently for aromatic hydrocarbons with no side chains this ratio has a value of approximately 6.9, and for naphthenic ring compounds without side chains about 6. Granting that the vapor pressure curves can be represented by Figure 2, this relationship immediately makes it possible to construct the critical curves for these three classes of compounds. The corresponding curves are shown on the figure.

Another method of prediction of critical temperatures is that of Watson.[1] That author has shown that the critical temperature is given with remarkable precision by the formula,

$$T_c = \frac{T_s + \Delta}{0.283\,(M/d_s)\,0.18}$$

T_s is the atmospheric boiling point of the material on the absolute scale (°K), M is its molecular weight, and d_s its

*Head of the department of chemical engineering, Massachusetts Institute of Technology, Cambridge, Mass.
Author's title: "The Properties of Hydrocarbon Mixtures as Related to Production Problems."

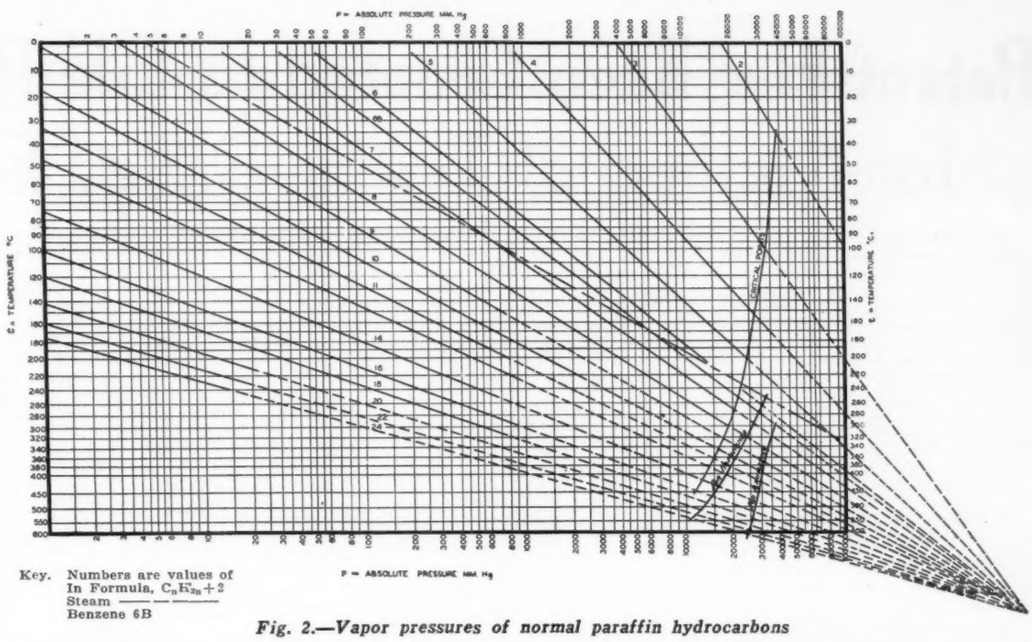
[1]Ind. Eng. Chem., Vol. 23, p. 361, 1931; Vol. 25, p. 880, 1933.

specific gravity at its atmospheric boiling point. Δ is a correction factor, depending on the normal boiling point only, which may be read from the curve of Figure 3. It is true that this method of calculation requires the specific gravity of the material at its atmospheric boiling point; this can be measured directly, or calculated from the density at normal temperatures by the known coefficient of expansion.

Vapor Densities

At very low pressures the vapors of all hydrocarbons follow the gas laws, most conveniently written in the form, $PV = nRT$. As pressures increase, deviations begin to develop, and for all hydrocarbons at normal temperatures the densities are greater and the volumes less than those calculated from the gas laws. The data available are none too extensive, but analysis of them by various investigators during the last few years has shown that they can be correlated very satisfactorily on the basis of the critical values of the individual hydrocarbons. This is done by assuming that the relation between pressure, temperature and volume of any pure hydrocarbon can be represented by the gas equation by the introduction of a correction factor, μ, writing $PV = \mu nRT$. If, now, the pressure, P, under which the hydrocarbon exists be expressed as a fraction of the critical pressure, P_c, this fraction $P_R = P/P_c$, being called the reduced pressure, and the temperature similarly as a fraction of the critical temperature, i.e., as a reduced temperature, $T_R = T/T_c$, it is found that for all hydrocarbons having more than 3 carbon atoms per molecule, the correction factor, μ, to the gas laws is a unique function of the reduced temperature and pressure given by the curves of Figure 4. Clearly, this puts one in a position to evaluate the volume or density of any pure hydrocarbon vapor under any conditions of temperature and pressure, provided one knows its critical constants.

Replotting the data on which Figure 4 is based shows that at high pressures the so-called isometrics, i.e., the curves of pressure against temperature at constant volume, are substantially straight lines over considerable ranges. Furthermore, if these be plotted on a reduced basis, i.e., as P_R vs. T_R at constant V_R, as is done in Figure 5, it is found that all higher hydrocarbons (those having more than 3 carbon atoms per molecule) fall on a single diagram. Figures 4 and 5 are equivalent and represent merely different ways of expressing the same relationships. In use, sometimes one and sometimes the other is found the more convenient.



Key. Numbers are values of n in Formula, $C_nH_{2n}+2$
Steam ——
Benzene 6B

Fig. 2.—Vapor pressures of normal paraffin hydrocarbons

General correlations of the specific heats of hydrocarbon liquids and of their vapors under pressures sufficiently low so that deviations from the gas laws may be neglected are available.[2] A useful correlation of the heats of vaporization which is valid so long as the vapor pressure is not too high is the Hildebrand function, shown in Figure 6. Inspection of Figure 4 shows the very large deviation from the gas laws suffered by the vapors at high pressures, and deviations from their thermal behavior at low pressures are to be expected. It is readily shown thermodynamically that the correction for the effect of pressure can be expressed in the relatively simple terms of Figure 7. In any operation involving

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[2]Free Energies of Some Organic Compounds, Parks & Huffman, Chem. Cat. Co., Inc., 1932. p. 68.

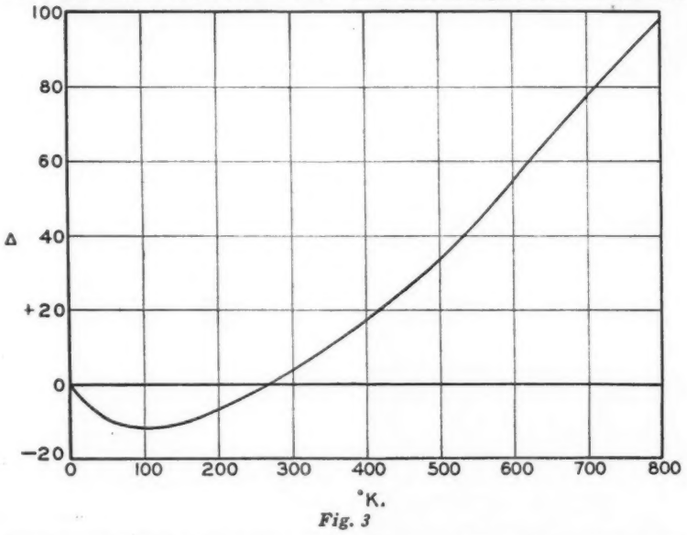


Fig. 3

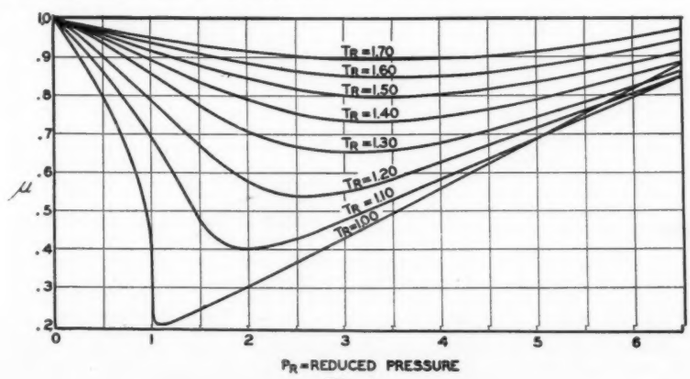


Fig. 4

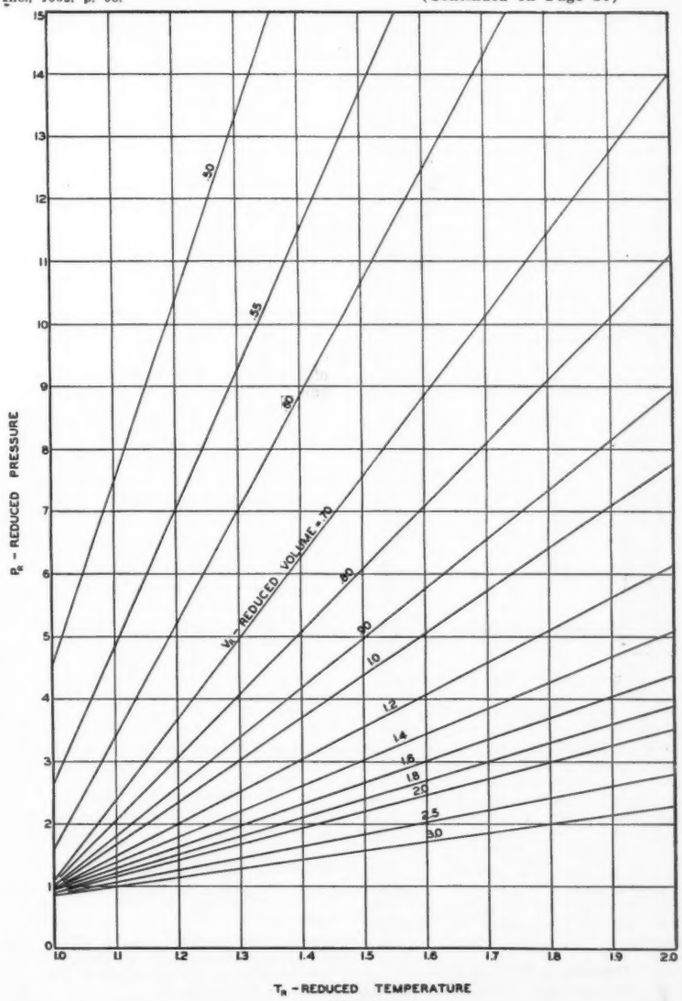


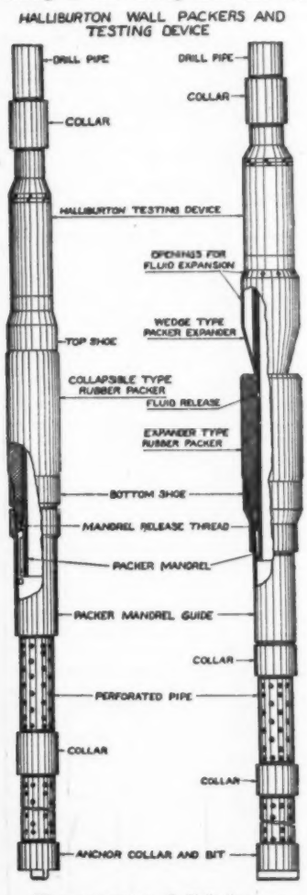
Fig. 5

Patent Has Been Granted to Erle P. Halliburton for Method of Testing Drilled Formations

After almost eight years of continuous prosecution through each successive step, including the highest tribunal in the U. S. Patent Office, a broad patent has just been granted to Erle P. Halliburton covering the method of testing formations as now practiced, without setting a regular string of casing. This letters patent is No. 1,930,987, issued October 17, 1933, and entitled "A Method and Apparatus of Testing the Productivity of Formations Encountered in Drilling Wells" which has become known throughout the trade as the Halliburton Method.

The following is one of a number of claims granted in the patent:

"A method of testing the productivity of a formation encountered in a well containing drilling fluid involving the insertion of only a single string of pipe into the well to make a test, which includes lowering a test string into the well



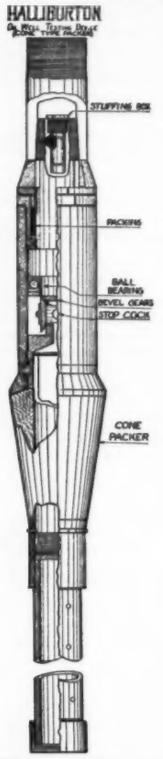
Howco tester, full hole type

through the drilling fluid with a packer carried by the string and a valve inlet at the lower end of the string closed against the entrance of fluid from the well, setting the packer above the formation and opening the valve to permit cognate fluid from the formation to enter the inlet, closing the valve to prevent the subsequent entrance of fluid from the well through the inlet and releasing the packer, and raising the test string with the inlet closed against the entrance of fluid from the well to remove an entrapped sample."

Relation to Drilling Wells

The effectiveness of this method not only has an important relation to the art of drilling wells, particularly to drilling wells by the rotary method, but also provides a very important measure of economy.

Prior to the discovery of this testing method, the major objection to a drilling method which required that the hole contain considerable hydraulic drilling fluid was that in order to test the productivity



Howco tester, rat hole type

of a formation it was necessary to either bail the hydraulic fluid out of the hole or, if bailing were impractical, to set a string of casing and then bail. The bailing method was usually impractical due to possible caving of formations, and setting casing was undesirable due to great expense and to the restriction imposed upon deeper drilling.

Therefore, the invention of a simple, effective and inexpensive method of testing the productivity of formations that would not require bailing or setting casing would mark an important step in the art of drilling wells. This very desirable step was accomplished upon the introduction of the Halliburton Method. Drilling costs are materially reduced—often as much as one-half—and to the wildcatter the method is of untold value, enabling him to test any formation without the expense of setting casing and without restricting possibilities of deeper drilling.

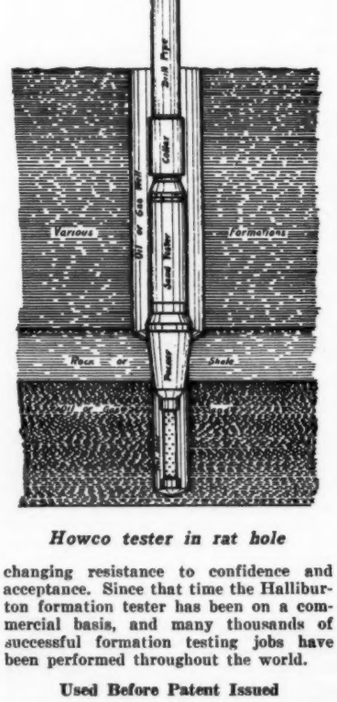
Importance of Test

In producing fields, as well as wildcats, many formations are proven good producers by means of this testing method that would be passed up as too doubtful in appearance to risk the expense of a test by setting casing. On the other hand, there are cases in which a core will resemble cores taken from an offset producing well but which, on being tested, either water or an insufficient quantity of oil or gas is found.

The method described in the above quoted claim, and a testing device for the purpose of accomplishing that method, was first introduced to the trade in the spring of 1926 by Mr. Halliburton. The device has become known throughout the oil fields as the Halliburton formation tester.

The first attempt to commercialize this formation tester met with considerable resistance from operators. There was a feeling that the tester could not be lowered into a well and left stationary for the time necessary to make a test without becoming stuck in the hole. As a result of this resistance it was very difficult to secure permission to make an introductory test. However, Mr. Halliburton eventually obtained permission to operate the formation tester in a well for the purpose of making a productive test, but it was necessary for him to enter into an agreement indemnifying the owner of the well against any damage to the well that might result from the use of the tester.

Although this introduction was a success, demonstrating the value and utility of the device, and although considerable of the general resistance was broken down, a great deal of hesitancy still existed. Mr. Halliburton then put several men in the field to make free introductory tests, which continued over a period of several months. Many tests were made and, although this free introduction entailed considerable expense, it resulted in



Howco tester in rat hole

changing resistance to confidence and acceptance. Since that time the Halliburton formation tester has been on a commercial basis, and many thousands of successful formation testing jobs have been performed throughout the world.

Used Before Patent Issued

One of the interesting highlights of formation testing is that Mr. Halliburton did not wait until after the patent was issued to offer the invention to the industry. Although this is considered as a constructive move, it also was responsible in considerable measure for the eight years of continued litigation and prosecution through the U. S. Patent Office. In February, 1927, he carried a two-page advertising spread in the leading trade journals, describing the formation testing method and device. The introduction of the device and the public announcement and description, coupled with the important commercial field which was opened, stirred a flock of inventors to file applications in the U. S. Patent Office on testing devices of one form or another. Patents have already been granted on many of these applications but, according to Mr. Halliburton, each of those that he knows about is restricted to some minor form of apparatus and the manufacture and use of which would infringe the Halliburton method patent. The original application on this method, bearing Serial No. 87,323, was filed in the U. S. Patent Office on February 10, 1926, and the chief reason for the long delay in granting the patent resulted from the necessity of having to oppose the claims of some 10 other inventors who claimed to be the original inventors of this same subject matter.

Although this long siege of continuous prosecution was doubtless very tedious and expensive, Mr. Halliburton has emphatically stated that he would not increase the price of formation testing as a result of having been granted this broad patent, but intends to carry on the testing service at the same reasonable price that it was first offered to the industry. By this constructive means he looks for continued confidence of the industry.

"What next?" is a likely question in the minds of many about Erle P. Halliburton, whose well-known developments in the art of oil well cementing, automatic drilling control, etc., are fit companions for this major contribution to drilling practice, formation testing.

Price Fixing Will Benefit Eastern Oil Men, Dow Says

By R. C. CONINE

OLEAN, N. Y., Oct. 16.—Pennsylvania Grade producers and refiners gain important advantages in the price fixing schedule effective December 1, Fayette B. Dow, vice president and general counsel of the Pennsylvania Grade Crude Oil Association, told members of the New York State Oil Producers Association at their annual meeting here tonight. Minimum crude prices ranging from $2 to $2.50 for various districts, the 1.5-cent freight differential, and the 1-cent price differential between low and middle octane gasolines would help the grade men, he said. Mr. Dow warned, however, that any scheme of price fixing will fail if the industry does not achieve an economic balance in supply and demand. With refiners in the Mid-Continent, North Texas, Louisiana and Kentucky districts running crude at high levels, efforts are being made to fix and allocate aggregate runs to stills under the code.

The New York association went on record for an eight-hour day at $5 for drillers and $4.50 for tool dressers. A technical division was formed with George W. Holbrook as chairman. The following were elected members of the board of directors: Col. D. J. Sweeney, F. E. Richart, J. P. Herrick, O. W. Walchli, A. L. Shaner, John Messer, George W. Holbrook, Lewis H. Thornton, W. N. Davis, R. B. Moore, H. E. Goodrich, John Bradley, Alwin Schaller, F. D. Dorn, and J. K. Cochran. President Sweeney was in charge of the meeting.

FEDERAL CONTROL ATTACKED

AUSTIN, Tex., Oct. 16.—Federal oil control in Tyler, Tex., is attcked by the McMurrey Corp. which has filed a petition in the U. S. District Court against the Texas Railroad Commission and others asking for an injunction against enforcement of the commission's proration orders which are based on Secretary Ickes' crude oil allotment for Texas.

Apparatus for Precise Viscosity Measurement Developed at Pennsylvania State College

By ROBERT C. CONINE

OIL CITY, Pa., Oct. 16.—Noting that an error of as little as 1 per cent in the 210° F. viscosity of a light Pennsylvania motor oil meant an error of about 4 per cent in the calculated viscosity index of the lubricant, investigators in the petroleum refining laboratory of Pennsylvania State College have developed a viscometer which they assert combines the best features of known instruments. In order to derive a reliable viscosity index, it is pointed out, the actual viscosity should be known within 0.5 per cent and even closer in the case of lighter oils at 210° F.

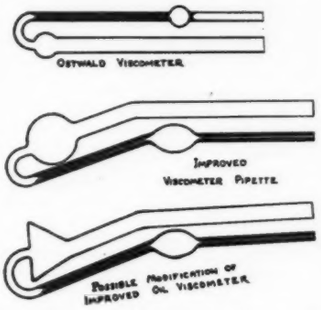
At the outset of research work on lubricating oils, therefore, the investigators, W. B. McCluer, E. A. Willihnganze and R. V. McGrew, with M. R. Fenske and F. C. Whitmore supervising, sought to devise means of eliminating errors in viscosity measurements. The results of their work is presented in detail in their report to the Pennsylvania Grade Crude Oil Association, on "Methods and Apparatus for Accurate Viscosity Measurements," and is here outlined. Graph No. 1 shows the influence of errors in viscosity measurements on the viscosity index.

The objective was to develop an instrument and perfect a technique whereby the order of permissible error for individual measurements of viscosity would be restricted to 0.2 per cent, and error arising from any single source, such as time or temperature, should be limited to 0.1 per cent. It was also desired that the results should be given in absolute units of universal import. The Ostwald type of viscometer, Figure 1, was selected as the basis for development of a suitable instrument.

In this glass pipette the liquid under test flows by gravity from the upper bulb to the lower bulb through a long capillary, after the upper bulb is filled by suction from the lower bulb. Etched lines above and below the upper bulb mark the full and empty positions for the test. In a properly designed Ostwald pipette the time of flow is proportional to the viscosity of the liquid and can be determined more accurately, according to the investigators, than in other types of viscometers. Possible sources of error to be avoided are: dust or air bubbles in the capillary; uneven temperature; inaccurate measurement; conditions producing a time of flow not strictly proportional to the viscosity; variations in volume of liquid adhering to walls of the upper bulb changing the volume that flows through the capillary. The problem was to effect a design in a pipette viscometer which would eliminate these sources of error or so minimize them that corrections might well be included in the calibration constant of the viscometer within the permissible limits of error. In the course of investigation it was found that means were readily available for producing extremely accurate results with a minimum of calculation, the readings being arrived at simply in poises and centipoises, or stokes and centistokes.

Experimentation

Experimentation showed that time of flow is directly proportional to the absolute viscosity (n), the length of the



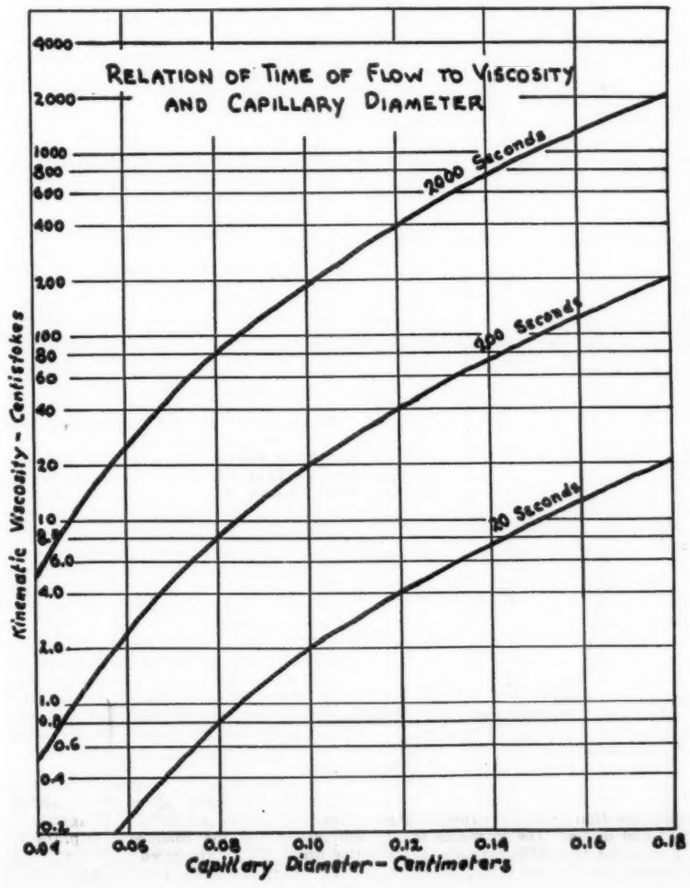
tube (l), and the volume (V) of the liquid that flows through it, and is inversely proportional to the pressure (p) forcing the liquid through the tube, to the fourth power of the radius (r^4) of the tube, and to the force of gravity (g). It was pointed out that in viscometers of this type, gravity as well as viscosity determines time of flow, which is then proportional to the absolute viscosity, in centipoises, divided by the density (d) in grams per cubic centimeter in air, and this ratio is known as the kinematic viscosity (KV) of which the unit is the stoke. The absolute viscosity is derived readily: $KVd = n$.

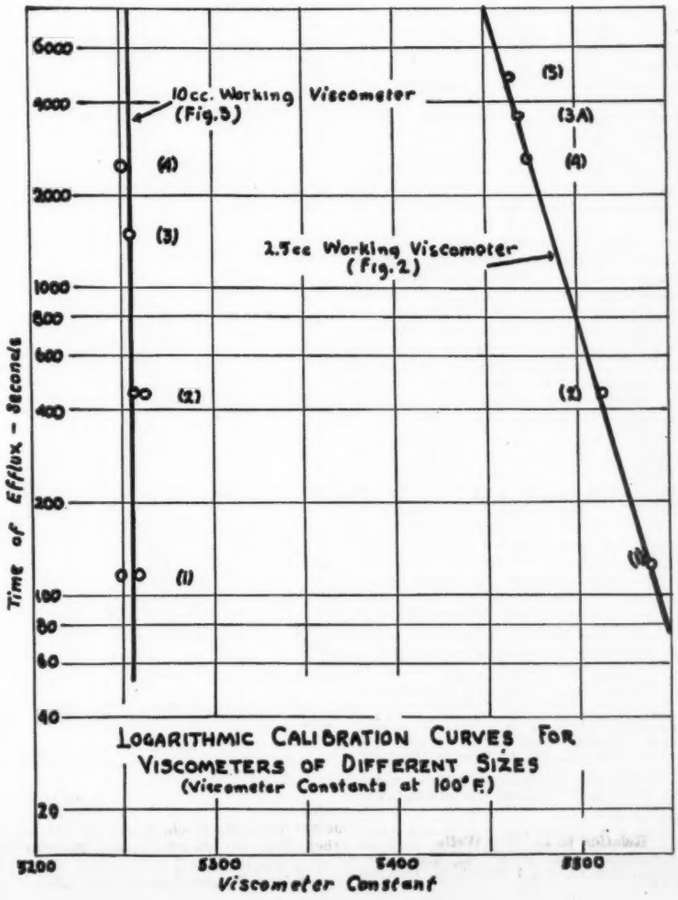
When an Ostwald viscometer has been calibrated the kinematic viscosity of any liquid can be easily calculated from its time of flow. The kinematic viscosity of any oil is determined simply by observing its time of flow (t) and dividing this time by the calibration constant of the viscometer (C): $KV = \frac{t}{C}$.

The constant for a given viscometer is arrived at by using a transported form of Poiseuille's law: $\frac{t}{KV} = \frac{8lV}{3.1416\,gHr^4}$. This calibration constant (C) was evaluated by measuring the time of flow (t_o) for a standard liquid of known kinematic viscosity (KV_o): $C = \frac{t_o}{KV_o}$, this calibration constant remaining the same regardless of the viscosity of the oil examined.

The investigators redesigned the Ostwald pipette to eliminate the necessity for corrections, producing the type shown in Figure 2. To make drainage of the upper bulb more complete the draining

(Continued on Page 30)





Study of Overhanging Salt on Various Domes of Texas and Louisiana Areas: Part Two

By SIDNEY A. JUDSON[1] and R. A. STAMEY[2]
Houston, Tex.

The rotary drilling methods usually employed in unconsolidated formations are modified in practice to meet the special conditions presented by the overhang. Such methods were described in detail by Williams[14], Logan[15], and by Judson and Battle[16]. The principal difficulties to be overcome are caused by the natural caverns in the cap rock and by the solution caverns frequently formed in the salt by drilling.

The principal problem in the cap rock occurs when drilling fluid is lost in its porous zones. Due to the low hydrostatic head existing in these cavities the drilling fluid flows into the cavernous portions of the cap rock and no longer

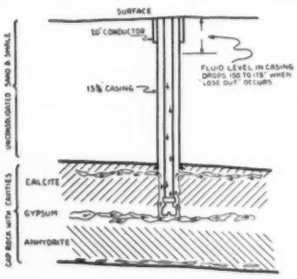


FIGURE 1(a)

LOSS OF DRILL FLUID IN CAP ROCK CAVITIES

returns to the surface, or in the language of the driller a "lose out" occurs. This is illustrated in Figure 1-b. These cavernous zones are so extensive that several million barrels of drilling fluid and water have been pumped into the cap rock of a single dome without greatly increasing the hydrostatic head in the cavernous zone. When returns are lost there is much danger of the drill pipe "sticking" due to the unconsolidated formations above the cap rock falling into the hole as the fluid level quickly lowers. Such fishing jobs can usually be avoided by a close examination by a geologist of the cuttings from the well every few feet just above the expected position of the top of the calcite zone of the cap rock so that casing can then be set at nearly the exact top of the cap rock. This practice permits drilling to proceed through the cap rock even though the drilling fluid escapes into the cavities since the casing cuts off the unconsolidated formations that tend most readily to cave into the hole. The usual practice upon encountering the cavernous zone in the cap rock is to fill the cavities or loose sands with cement. A mixture composed of ordinary cement to which has been added a small percentage of bentonitic compound or other chemicals to increase its "angle of repose" is pumped into the hole in sufficient quantities to fill up the cavities immediately surrounding the drill hole. This process is repeated as needed. Another method used is to set and cement a short liner through the cavernous zone.

Supersaturated Salt Solution

Upon reaching the salt extremely large solution caverns may be dissolved out in the salt if fresh water drilling fluid is continued in use. These caverns tend to produce crooked holes and sometimes cause extremely difficult fishing jobs. This condition is avoided by using a supersaturated salt solution in place of the fresh water drilling fluid. As drilling is continued through the salt, in order to prevent an accumulation of salt cuttings in the bottom of the hole which would interfere with further drilling, it is customary to add continuously small amounts of fresh water to the drilling fluid to dissolve these cuttings. In any event an attempt is made to keep the drilling fluid of such a composition that an excessive amount of salt cuttings will not remain in the bottom of the hole but will be dissolved without enlarging the hole above to an excessive size.

Frequent well surveys are necessary to detect an excessively crooked hole, which often occurs while drilling in salt. These crooks are usually corrected by cementing back to where the "crook" first starts and then redrilling the hole cautiously. When this method fails the hole is sometimes enlarged by drilling with fresh water while reaming, to form a cavern in which the bit will swing into a vertical position because of gravity. The hole is then drilled ahead with but little weight on the bit.

In general the difficult drilling conditions occurring in the cap rock and salt are so varied as to require the greatest resourcefulness and ingenuity on the part of the operator. However, improvement of drilling methods through cap rock and salt has been given much attention in the last two or three years by chemical and petroleum engineers and by field organizations with the result that these operations are being rapidly improved.

Probability of Existence of Overhangs on Other Domes

The probable number of domes that will later be found to have overhangs can be guessed at principally by comparing the number of domes explored for overhangs with the number of overhangs discovered. Approximately 112 domes are known to exist in the salt dome provinces of Texas and Louisiana. Of these approximately 18 shallow domes that appeared most likely to have overhangs have had at least partial exploration for such a condition. This exploration has been usually confined to the particular flank of a dome that appeared to the operator most likely to carry an overhang. From this drilling a total of 11 overhangs have been found, although with the exception of Barbers Hill, High Island and Vinton it is unknown whether these are extensive overhangs or merely small ledges of salt. Accordingly, it will be seen that by the exploration of 16 per cent of the total number of domes, 11 overhangs have been discovered, or approximately 70 per cent of the total number of domes explored. It is believed that this percentage will be too high for the total number of domes. However, this exploration has been so meager compared with the total number of domes that there is insufficient basis for making more than a mere guess as to the total number of known domes that will finally be found to have overhangs.

It is considered probable that a considerable variation is likely to exist in the type of overhangs that will be found depending upon the presence or absence of a thick cap rock covering the top of the salt dome. It is believed that a thick cap rock not only acts as a sheath to protect the upper part of the salt dome from solution by circulating waters, while at the same time the portion of the salt below the cap rock is reasonably free to attack the solution, but that a thick cap rock also tends to create outward flowage of the salt because of its resistance to the upward movement of the salt on account of the higher specific gravity of the cap rock. Thus overhangs of considerable magnitude and extent might reasonably be expected to be mostly confined to those domes where thick cap rocks are present. Conversely the domes where cap rock is absent would likely furnish only overhangs in the nature of ledges formed from local "pitting" of the

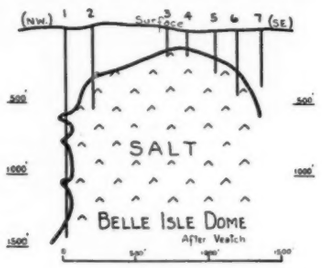


FIGURE 3

(1) Gulf No. 5; (2) Gulf No. 1; (3)Gulf No. 12; (4) Mine Shaft; (5) Gulf No. 10; (6) Lucas No. 4; (7) Gulf No. 14

salt face through water bearing beds coming in contact with the salt.

On account of the greater freedom of circulation of the waters at shallow depths than at considerable depths it is believed that extensive overhangs are much more likely to occur within 4,000 feet of the surface than would be expected below that point and still within present drilling depths. That is, overhangs of the largest size will most likely be found in the shallow dome class. This does not take into consideration extensive overhangs that may possibly occur much below the depth of present wells where the overlying prism of sediments is of much greater weight than a corresponding prism of the salt, with the result that the diameter of the salt plug at these greater depths may be diminished by the squeezing action upon the salt by the surrounding sedimentary formations.

Domes in Gulf Coastal Plain of Louisiana

Belle Isle

General Description — Belle Isle salt dome is the southernmost of the "Five Islands" and is located in St. Mary's Parish on the edge of Atchafalaya Bay of the Gulf of Mexico. A detailed description of this dome with full references to previous literature is given by Vaughan.[17] The results of a later torsion balance survey and subsequent drilling are discussed by Barton.[18]

Belle Isle rises out of the marshes to a maximum of 80 feet in the series of low hills which cover the western portion of the dome. This exceptional topographic rise above a coastal salt dome indicates recent upward movement of the dome.

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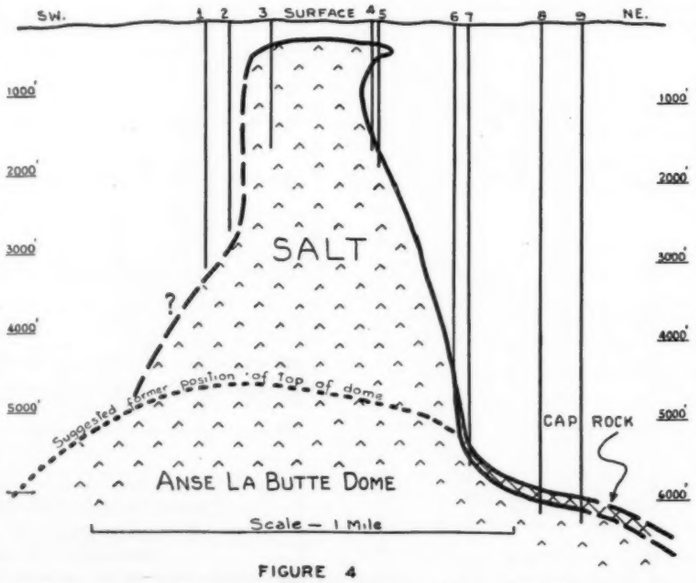

FIGURE 4

(1) Humble-Moresi No. 5; (2) Humble-Moresi No. 3; (3) Heywood Martin No. (?); (4) Heywood Martin No. 1; (5) Anse LaButte Begnaud No. 2; (6) Yount Lee-La. Pet. Co. No. 3; (7) Yount Lee-La. Pet Co. No. 5; (8) Yount Lee-Herbert No. 1; (9) Yount Lee-Herbert No. 2

Part 1 of this article was published in The Oil and Gas Journal October 12.

Presented at Houston meeting of American Association of Petroleum Geologists.

Complete paper will be published in the December A. A. P. G. Bulletin.

[1]Chief geologist, Texas Gulf Producing Co.

[2]Geologist, Texas Gulf Producing Co.

[14]Neil Williams, "New Practices in Going Through Cavities in Salt Domes Reduce Coastal Drilling Costs," The Oil and Gas Journal, Vol. 31, No. 5, June 20, 1932, pp 49-50.

[15]Jack Logan, "Advanced Drilling Methods Used in Gulf Coast Operations," The Oil Weekly, Vol. 68, No. 1, December 19, 1932, p 21.

[16]Sidney A. Judson and J. C. Battle, "Special Methods Required to Drill Through Overhanging Cap Rock and Salt," Oil Weekly, Vol. 69, No. 1, March 20, 1933, pp 59-62.

[17]Francis Edward Vaughn, "The Five Islands, Louisiana," Bull. Amer. Assoc. Petrol. Geol. Vol. 9, No. 4, July, 1925, pp. 783-794.

[18]Donald C. Barton, "Belle Isle Torsion Balance Survey, St. Mary's Parish, Louisiana," Bull. Amer. Assoc. Petrol. Geol. Vol. 15, No. 11, November, 1931, pp. 1,335-1,350.

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Forced Into It

The prices for oil and gasoline fixed by the government are better than those the industry itself has been able to establish. That is one heartening effect of Secretary Ickes' order.

Another is the hope that it will end chaotic competition with resulting losses and stabilize the industry on a basis upon which it can build enduring prosperity.

Whatever may be thought of the principle of governmental price fixing there is this to be said about it. As with the NRA, conditions seemed so hopeless, so dead-centered, that only action by the government could get us off.

Just as the country is accepting the NRA as the only method offered to bring us out of the depression the oil industry must accept governmental price fixing as the only visible remedy for its conditions.

The President has undoubtedly been reluctant to take this step, so unprecedented and so opposed to our traditional American principles. The action has been forced upon him by the persistent refractoriness of the unruly elements in the industry. There may be a grim though uncompensating satisfaction in the thought that these elements will be the first to regret what they forced upon the industry.

Every unfair practice which they have been pursuing and upon which they depended for their profits will now be outlawed. They will be more completely eliminated from the picture than would have been possible had they gone along with the rest of the industry in maintaining a workable system of industrial self-government.

They have gained nothing by their obstruction and they have lost everything.

But what they have lost the industry has gained. Stabilization, even under government control of prices, will at least free the industry from the losses forced upon it by unfair competition.

The minimum prices set may be too low, considering the additional expenditures placed upon the industry by the employment provisions of the code, but there is no finality about them.

An administration which has been fair enough to take the Planning and Co-ordinating Committee's recommendations as a base can be depended upon to give the industry a fair hearing and a just deal.

Difficulties may be expected. The elements which have kept the industry demoralized are not likely to give up without effort. It may take some little time, but there is confidence that the power of the government, aided as it must be by the active co-operation of the industry, will be effective enough to enforce the law.

On this point it may be added that if any considerable portion of the industry withholds that active co-operation or tolerates violation of the spirit of the code we may have more than price fixing forced upon us.

On the other hand, it has been shown that this price fixing order has been resorted to only as a last recourse. There has been no inclination on the part of the administration to take control of the industry.

Price fixing is not a policy of the administration. It is an expedient dictated by an emergency. Also, it is an experiment.

Historically, attempts at price fixing have been failures. But there has never been exactly such conditions as we have today. The NRA itself is unprecedented. It has been a question since its inception whether it can be carried to a logical conclusion without some form of price fixing.

A great deal will depend upon the outcome of price fixing in the oil industry. If it succeeds there will be demands for its extension to other industries.

It has been just this prospect that has undoubtedly caused the administration to hold off as long as possible from fixing oil prices. It is an opening, and no one can foretell how far it may extend.

For that reason the administration it is believed would be glad if the industry could take hold of its problems and work out a solution that would permit the lifting of the governmental control of oil prices.

The NRA runs for two years unless abandoned. In that period there should be a natural improvement in the oil situation, as well as a general improvement in business conditions.

Actual demonstration of the value of stabilized oil prices should be so convincing that the whole industry could get behind a program of self-government that would perpetuate that condition with the assistance of a very limited governmental authority.

That, it seems, should be the goal to be sought. The alternative, of course, would be a further clamping of governmental control on the industry, establishing not only minimum but maximum prices from the well to the filling station. Does the industry want that?

Meanwhile, between now and December 1 the industry has the best opportunity it ever had to get its case before the public, in all its phases.

It can proceed with the assurance that it has nothing to conceal, that its minimum demands have been approved by the government and that it is entitled to a fair return on its investment and operations.

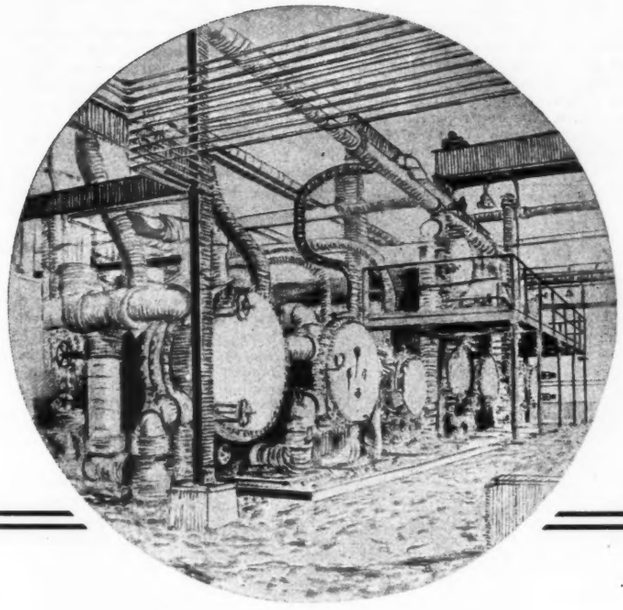
The NRA Consumers Advisory Board has been reported concerned about advancing gasoline prices. The industry can welcome any such inquiry.

Groceries have gone up, clothing has gone up, furnishings have gone up, practically everything has gone up—in some cases to utterly unwarranted heights, but if gasoline goes up ever so little there is an instant hue and cry, although gasoline has sunk lower than all commodities and has the same reason for going up as anything else because of the added expenses due to the code.

Let the Consumers Board, for instance, compare the 10.55 cent refinery price in 1925, the 10.31 price in 1926, the 6.67 price in 1927, the 7.95 price in 1928 and the 7.75 price in 1929 with the 2.27 cent refinery price in the first half of 1933 and then let it say whether a 6.50 price today is out of line with fairness.

Let it consider, too, that between 1925 and the present day the taxes have added 3.30 cents to the cost of gasoline. There is the real increase. It is not due to the oil industry but is due to government.

The coming hearings should prove that the industry is entitled, in all justice, not merely to the minimum in the new order but to a substantial increase.



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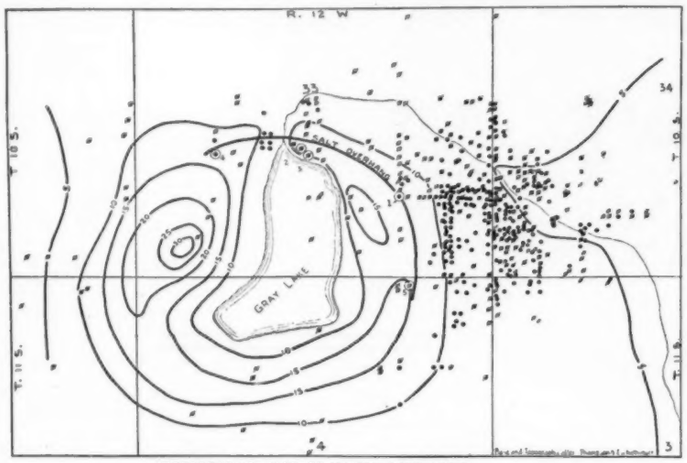
Overhanging Salt on Texas, Louisiana Dome

(Continued from Page 18)

The topography is not suggestive of overhanging salt.

This dome is oval in plan, its longer axis being approximately 1.4 miles at a depth of 1,000 feet. It is extremely shallow, salt being found in one well within 117 feet of the surface.

Drilling operations were started here in 1896 and since that time between 30 and 35 tests have been drilled in exploration for oil or sulphur. These, with a few exceptions, were shallow holes above the salt. The flakes of the salt have been only partially defined. Showings of oil, gas and sulphur were reported but these minerals have not been developed in commercial quantities.



TOPOGRAPHIC MAP OF VINTON SALT DOME

Scale — 1 Mile

FIGURE 5

Overhang—A succession of salt ledges were found in Gulf No. 15 which was drilled during the year 1898. This well was shown in a cross section by Veatch[19] as having passed through three small ledges of salt alternating with other formations between the depths of 600 and 1,100 feet. These salt ledges were in no case in excess of 30 feet in thickness. The drill went into salt again at approximately 1,350 feet and the hole was abandoned in salt at approximately 1,500 feet. It appears from a study of the accompanying cross section after Veatch[19] shown in Figure 3, that these small projections of salt extending outward into probable sedimentary beds do not constitute a well defined salt overhang of the type found at Anse La Butte, Vinton and Barbers Hill, yet the condition as pictured at Belle Isle comes definitely within the terms of the definition of salt overhangs.

Knapp No. 1, drilled in the year 1907 or 1908 near the center of the dome, appears to have been an attempt to drill through the salt in search for oil in sedimentary formations beneath, since it was drilled in salt from a depth of 200 feet to 3,171 feet, an extraordinary amount of salt penetration for that time. This test must be classed as one of the exceptional explorations of this type, particularly if the stage of development of drilling methods at that time be considered. No wells other than the Gulf No. 15 are reported to have been drilled through a salt ledge on this dome.

The top of the salt at Belle Isle was found to contain pockets of sediments resembling those of the surrounding formations. While the amount of these impurities lessened with increasing depth thin bodies of sedimentary formations were recorded even near the center of the plug at a considerable depth in the salt. Shows of oil and gas in these sediments were shown by the drilling records in several instances. Sedimentary inclusions of this sort, existing well within the salt plug proper are not considered to be salt overhangs.

[19]"The Five Islands," Geol. Sur. of Louisiana Report for 1899, pp. 209-257.

Anse La Butte

General Description — Anse La Butte salt dome is located in St. Martin's Parish, Louisiana, approximately 60 miles northwest of Belle Isle. Its early development is described by Harris,[20], Hayes and Kennedy[21] and by Fenneman.[22] The surface above the dome rises 10 feet higher than the surrounding territory. A lake has formed in a central depression directly over the shallow salt which here rises to within approximately 100 feet of the surface. The upper part of the dome consists of a spine of salt of less than a half mile in diameter protruding up from the probable main salt mass whose tip is found at a depth of approximately 5,000 feet. This spine of salt has no extensive cap rock, although cap rock 150 feet in thickness is found on the top of the main salt body. Figure 4 is a cross section illustrating this interesting condition.

This dome was one of the first salt domes upon which oil development was started. The first producing well was drilled in 1902. Approximately 30 producing wells from shallow flank sands around the salt spine have been obtained out of over 100 tests drilled. A few large producers were obtained, but the total recovery to date amounts to only approximately 1,000,000 bbls.

Overhang — This dome furnishes the first known instance of an oil well of commercial size being produced from beneath an overhang of salt. The Heywood No. 1 on the north flank of the salt spine was recorded by Fenneman as having passed through salt from 268 to 540 feet into sands and clays and then back into salt again at 1,350 feet. This well was drilled in 1902 and made a 40-bbl. producer from a depth of 1,100 feet. This discovery of a salt overhang in the early days of salt dome development is noteworthy since it shows that the early pioneers of salt dome drilling believed that oil might be present beneath the salt. Two other wells are known to have been drilled through the salt overhang, one on the north flank and the other on the east flank of the salt spine but neither were important producers. It is believed that this overhang of salt is of but small extent and probably of little importance commercially.

Vinton Salt Dome

General Description—Vinton is located in the extreme western portion of the coastal plain of Louisiana in Calcasieu Parish and is fully described by Thompson and Eichelberger.[23] The surface over the dome rises 25 feet above the surrounding country and like Belle Isle has a central depression in which a lake has formed.

The topography is illustrated in Figure 5. This is a dome of the shallow type, with the top of the salt lying generally just below the 1,000-foot level. The nearly circular salt plug has a diameter of 3,700 feet at the 3,000-foot level and is overlain by a thick body of cap rock which is 400 feet thick in the central portion of the dome increasing to 750 feet on the north flank. The form of the cap and the suggested shape of the salt mass is illustrated by the south to north cross section of Figure 6 after Thompson and Eichelberger. The extraordinary wavelike rise of the deep salt shown on the north flank between Gulf Refining Co.'s No. 1 Gray and No. 2 Gray may be due to crooked holes.[24]

Vinton was the first of the salt domes to produce flank oil.

Exploration for oil was begun in 1901 but it was not until 1910 that the first flowing well was completed. Development after this was rapid. This field has produced more than 38,000,000 bbls. of oil principally from flank sands in a zone extending outward from the salt one-half mile on the east flank. Approximately 600 wells were drilled of which 400 were producers.

Overhang

The success of Anse la Butte in finding sedimentary beds containing some oil under a salt overhang prompted the operators at Vinton to explore for a similar overhang here, hoping that they might find large wells beneath.

As early as 1911 the Gulf-Wilson No. 1 on the northeast flank was drilled through cap rock from 975 to 1,106 feet,

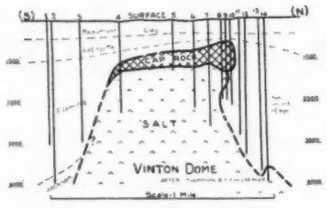


FIGURE 6

(1) Ged Petroleum Co.'s Gray No. 1; (2) The Texas Company's Gray No. B-1; (3) Stark Trust's Gray No. 1; (4) The Texas Company's Gray No. 1; (5) Carter Oil Company's Gray No. 1; (6) The Texas Company's Brooks & Bettis No. 1; (7) Supreme Oil Company's Gray No. 2; (8) Marrs McLean's Gray No. 3; (9) Marrs McLean's Gray No. 1; (10) Marrs McLean's Gray No. 4; (11) Marrs McLean's Gray No. 6; (12) Marrs McLean's Gray No. 5; (13) Gulf Refining Co.'s Gray No. 1; (14) Gulf Refining Co.'s Gray No. 2

salt 1,106 to 1,140 feet, gypsum 1,140 to 1,170 feet, and salt 1,170 to 1,413 feet. It was carried into sedimentary beds to a total depth of 2,100 feet, where the well was completed for a daily production of 20 bbls. Since then three wells on the north flank and one on the east flank have drilled through overhanging cap rock and salt. These tests show an overhang to exist for approximately one-third of the distance around the periphery of the dome (Figure 5) on the north and east flanks, although more exploration is necessary to determine how far this may extend. The cap rock overhang extends a short distance out beyond the salt overhang. The width of the overhang has not been defined by drilling, although on the north flank it is known to be at least 200 feet wide.

Approximately 1,000,000 bbls. of oil has been produced from beneath the salt and cap rock overhangs. However, it is probable that several exploratory tests will be required to determine whether extensive deposits of oil are present beneath the overhang.

[20]G. D. Harris," Oil and Gas in Louisiana," Bull. U. S. Geol. Sur. No. 429, 1910, page 34.

[21]Hayes and Kennedy, "Oil Fields of the Texas-Louisiana Gulf Coastal Plain." Bull. U. S. Geol. Sur., No. 212, 1903, page 130.

[22]N. M. Fenneman, "Oil Fields of Texas-Louisiana Gulf Coastal Plain," Bull. U. S. Geol. Sur. No. 282, 1906, pp. 105-110.

[23]S. A. Thompson and O. H. Eichelberger, "Vinton Salt Dome, Louisiana," Bull. Amer. Assoc. Petrol. Geol. Vol. 12, No. 4, April, 1928, pp. 385-394.

[24]S. A. Thompson, private communication.

D. H. Bancroft Passes Away at Shreveport, La.

D. H. Bancroft, manager of the Shreveport, La., office of The Oil and Gas Journal, passed away at his home in Shreveport last Thursday after an illness which resulted from disabilities suffered during

D. H. BANCROFT

army service in the World War. He was 43 years of age and is survived by his widow, two sons, Donald H., Jr., a student at Texas A. and M. College, and William, aged 12; his parents, Mr. and Mrs. E. H. Bancroft of Lafayette, La.; two sisters and a brother. Mr. Bancroft had been in poor health for a long time. In 1930 he entered the Veterans' Hospital at Alexandria, La., where he remained nearly two years.

Born at Port Huron, Mich., Mr. Bancroft moved to Hot Springs, Ark., with his parents when he was quite young. He was educated in the schools at Hot Springs and attended the University of Arkansas at Fayetteville. He served on the staffs of the Shreveport Times and Shreveport Journal and had been editor of the El Dorado, Ark., News, giving up that position to become manager of the Shreveport office of The Oil and Gas Journal in charge of the territory which embraced North Louisiana, Arkansas, Mississippi and Alabama.

Mr. Bancroft was a charter member of Lowe-McFarlane Post of the American Legion and that organization had charge of the funeral services last Saturday. Legion members attended the services in a body and full military honors were accorded the deceased.

HEARING ON EQUIPMENT CODE

The National Recovery Administration has given notice that on Friday, October 20, in the Carlton Hotel, Washington, a hearing will be held on the code of the American petroleum equipment industry and trade. This code was filed by the American Petroleum Equipment Suppliers Association, claiming to represent 90 per cent of the trade and 90 per cent of the industry. Deputy Administrator Malcolm Muir will conduct the hearing.

W. H. JEFFERY DIES

TOLEDO, Ohio, Oct. 16.—Walter H. Jeffery, age 59, died Friday in Flower Hospital. He was president of the Dixie Torpedo Co., operating in Kentucky. Mr. Jeffery, born in Toledo, lived here all his life. He was employed by the National Supply Co. for 20 years, resigning in 1917 to enter the torpedo manufacturing business, organizing the company which he headed.

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Adjustments Are Needed to Get Mid-Continent Market in Line With Price Fixing Program

By W. T. ZIEGENHAIN

Climaxing a week of quiet trading on the Group 3 (Oklahoma) refined oil market the industry learned Tuesday of a detailed program of Federal price fixing that is bound to alter things materially. The program had been discussed for weeks and arguments have been heard for and against it but the delay in announcement led many to believe it had fallen by the wayside.

Because the program of fixing crude oil, refinery and retail prices are so foreign to cutthroat methods practiced in the oil business since its beginning, the announcement that a full schedule would be made effective December 1 came as a surprise to many. The Mid-Continent market saw many adjustments to be made between now and December 1 to bring things in line for the Federal enforcement of price regulation.

Briefly stated, the program covers the price of crude oil in all fields, the tank car prices of the most important products at refineries in all areas and the filling station price for two grades of gasoline at all points. It does not provide for prices on material for export.

In the Mid-Continent 36 gravity crude is given a price of $1.11 a barrel. The existing differential of 2 cents per degree is continued and the schedule stops with oil below 25 gravity established at 87 cents and above 40 gravity $1.19. This is precisely the plan outlined for consideration of the Planning and Co-ordinating Committee more than a month ago. The new price represents an advance of 11 cents a barrel.

The proposal to fix prices of oil and its products was approved by many refiners. It was opposed vigorously by others. Thus the announcement of the Government's decision was a disappointment to one group at the same time that is was gratifying to another.

Refined Oil Market Barometer

The announcement Tuesday that the Federal administrator had decided in favor of fixing oil prices from the well to the filling station, effective December 1, changed the tone of the markets in all refining areas. The prospect of lower prices was converted to one of higher prices as the result of this announcement.

Mid-Continent—Natural gasoline strong; balance of products unchanged.
East Coast—Prices unchanged. Price fixing a stabilizing factor.
Chicago—Retail market weak. Large refiners withdraw spot quotations following price-fixing announcement.
Gulf Coast—Buying started on large scale with prices pointing higher.
Pennsylvania—Kerosene and gasoline weaker. Balance unchanged.
California—Increased buying follows announcement of price fixing. Larger refiners withhold quotation on spot market.

Refinery Prices

The Tulsa prices for refinery products which in practice will be the Group 3 or Oklahoma prices have been specified as follows:

	Cents
GASOLINE	
Below 50 octane number	5½
50 to 59.9 octane number	6
60 to 64.9 octane number	6½
65 to 70.0 octane number	7
KEROSENE	
41-43 gravity water white	4½
42-44 gravity water white	4¾
DISTILLATES	
38-40 light straw	3½
32-36 zero gas oil	3
FUEL OILS	
22-26 gravity fuel oil	73½
18-22 gravity fuel oil	71
14-18 gravity fuel oil	66

With the above schedule of minimum prices, it will be easy to anticipate what other products will sell for. It is also evident that questions will arise in regard to relative prices to charge for products bearing the above general classification but which have other specifications that make them better or less desirable than the average. The plan of fixing refinery prices follows the rather detailed plan of fixing crude prices and the supposition is that a firm crude market will more or less automatically guarantee a stabilized refinery market and the questions that will arise because of lack of more detailed refinery prices will be readily handled by the state and regional committees.

Retail Market

In establishing minimum prices for the gasoline at filling stations throughout the country, the general plan provides for the marketing of two grades. In all instances the delivered cost of the gasoline serves as the basis for the retail price. The retail dealer is provided with a minimum spread between his delivered cost price and his selling price minus tax. On all gasoline having an octane value between 50 and 59.9 the retail dealer is to receive at least 3 cents. On gasoline of 60 to 70 octane number the retail dealer is guaranteed 4 cents. In addition to the retail dealers' guaranteed margin, the plan provides for a higher total spread between the delivered cost and the selling price, in order to provide for the wholesaler. This is accomplished by a differential of 5½ cents, including dealer margin, between the cost price and the selling price for 50 to 59.9 octane gasoline and 6½ cents for 60 to 70 octane gasoline.

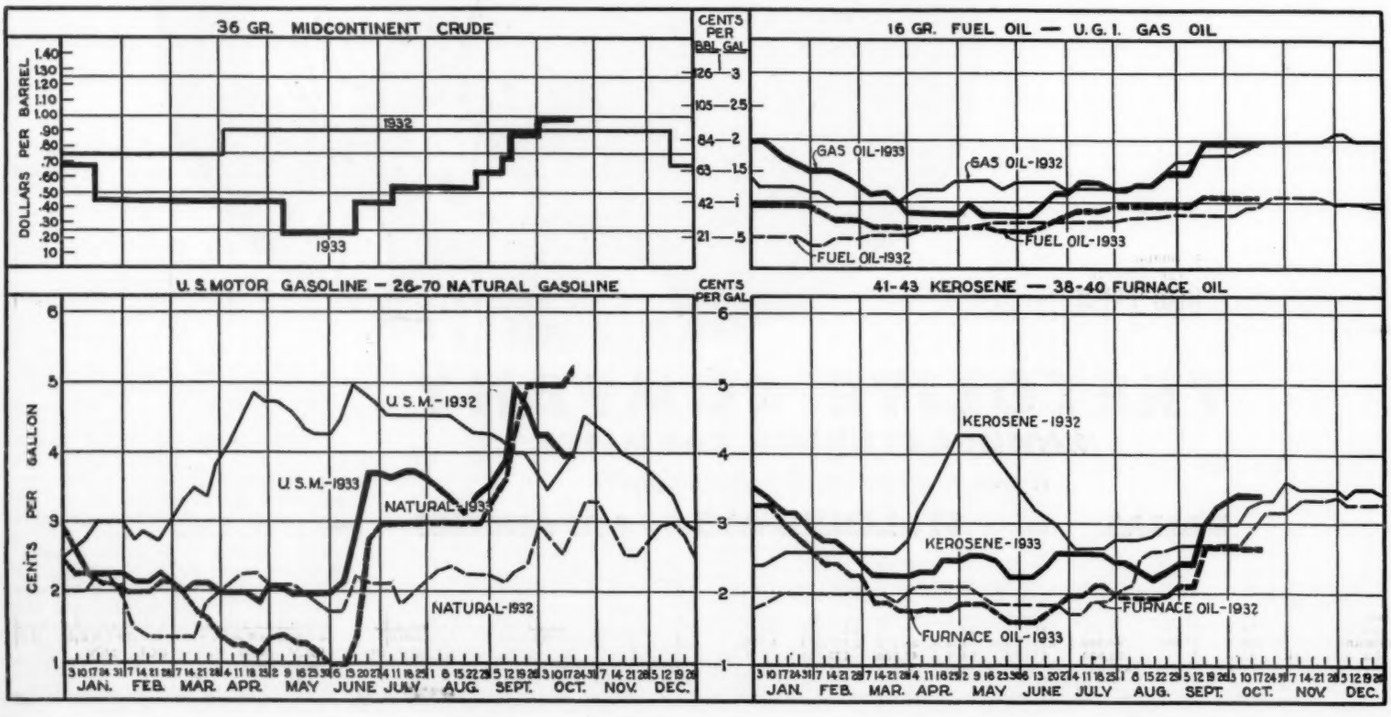
In effect then the filling station price at any point served by the Mid-Continent will involve the minimum refinery price, the transportation cost, the minimum wholesale and retail differential and direct tax. The manner in which the minimum filling station price is figured in Tulsa under the code will serve as an example to be applied elsewhere. The specified refinery price for 60 to 64.9 octane gasoline is 6½ cents. There are no refineries in Tulsa proper so a trucking charge of say 1 cent must be added to the refinery price as the delivery price at the filling station.

The wholesaler and retail margin combined has been established as 6½ cents for this grade of material and this brings the value of the gasoline at the station to 14 cents. When the taxes, amounting to 5½ cents, are added, the filling station price becomes 19½ cents. This would be considered the "regular price" and the price on the third grade would be 1 cent less if the gasoline has an octane number below 60.

Time alone can tell how well prices may be enforced under this system of computing minimums, but the announcement of the program is expected to have the immediate effect of halting the spread of ruinous price wars. In the past week third-grade gasoline prices dropped in most of the important areas. In Los An-

(Continued on Page 29)

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Demand Exceeds Last Year and Stocks Are Less; Eastern Motor Fuel Market Reported Firming

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, Oct. 16.—Refinery markets in this territory over the past week were devoid of unusual developments either in regard to changes in quotations or demand. Trading was along routine lines with a strong undertone with the possible exception of motor fuels and there were indications that this market was firming again the first of the week.

In regard to gasoline there continues to be considerable trouble at scattered points in the retail markets. Price cutting while not general is reported at several points extending from the New England states to Florida. Retailers handling unbranded gasolines have reduced the prices one or more cents per gallon under the third grade prices of the major distributors and in other cases secret price cutting is reported. In a few cases at least the larger distributors have reduced their competitive grade price to that established by the price cutters. The danger of such action is that the price cutting will spread to include a large area.

Another development of the week in the retail end was a protest by a garage dealers' organization in Brooklyn which claims that they are entitled to wider margins in the sale of gasoline and motor oils. They pointed out that they have the same margins now as they did when gasoline was selling from 2 to 3 cents below the present quotations. The trend not only in this territory but throughout the entire country over the past year has been to reduce the margins allowed for retail marketing and the independent dealers handling the branded products of major oil companies have had their guaranteed margins on gasoline reduced from more than 4 cents per gallon to around 3 cents per gallon.

Unless some general action is taken under the oil industry's NRA code it is not believed that the jobbers and refiners will widen the margins allowed dealers. Sales managers of the larger distributors point out that the wide margins of one or three years ago were a constant temptation to cut prices on the part of the dealers and they feel that the recent margins have materially improved that situation.

From the price standpoint the local trade over the past week have been more concerned with the tank car situation than they have the retail end. Export inquiries have slowed up and so far as known no large orders were placed during the week. The coastwise spot buying also has not been so active as it was the latter part of September and the first few days of October. As a result, some price shading was reported early last week. The reports from the Mid-Continent that major refiners were buying the distress gasoline available on that market has brought a better feeling here. It is thought that this buying minimizes the possibility that cheap material will be dumped on this market through the Gulf Coast, a development which would be reflected in lower bulk prices at East Coast refineries and terminals and which in turn might result in immediate reductions in tank wagon and service station prices at the larger consuming centers.

Government Report Encouraging

Those who have made a study of the Bureau of Mines reports released during the past week covering August operations in the oil industry are pointing to several encouraging developments in regard to demand and stocks not only in this territory but the entire country. The demand for several refinery products is now running ahead of last year, including gasoline, and stocks are lower than they were a year ago. It is contended that if crude oil production and crude oil runs to stills are curtailed in line with the recent program approved by the industry's and the Government's representatives a strong statistical situation in regard to the supply and demand for petroleum products can easily be maintained. The Bureau of Mines report briefly summarized for the entire country shows the following comparative situation for August, 1932 and August, 1933:

STOCKS (BBLS.)

	August 31, 1932	August 31 1933	Decr. 1933 (pct.)
Motor fuel....	57,592,000	51,814,000	10
Kerosene	6,247,000	8,445,000	*35
Gas oil and fuel oil	138,995,000	132,914,000	4.4
Lubricants ...	7,226,000	7,965,000	*19
Wax (lbs.) ...	206,461,000	85,924,000	59

*Increase.

TOTAL DEMAND
(Domestic demand plus exports)

	August 31, 1932	August 31 1933	Gain 1933 (pct.)
Motor fuel	37,573,000	39,387,000	4.8
Kerosene	3,284,000	3,499,000	6.1
Gas oil and fuel oil	22,872,000	26,963,900	18
Lubricants ...	1,713,000	1,992,000	16
Wax (lbs.) ...	36,297,000	57,407,000	58

Demand Increasing

The most important situation indicated in these data is the increase in demand over August of last year. This may be due in part to speculative buying on the part of those who anticipated higher prices, but it is certain that this factor was not as important in the oil business as it was in other lines of industries. Because of their bulkiness the principal refinery products are not readily stored by consumers and jobbers and the quantity of material that can be bought in expectation of higher prices is limited. The figures on demand are based on refinery shipments.

It will be noted that the increase in motor fuel demand was almost 5 per cent over August of last year despite a decrease in exports. In contrast to the situation earlier in the year, gasoline demand in recent months has been showing increases over the same period last year and the accumulative figures for the first nine months now show a slight increase over the same period in 1932.

The kerosene demand which increased last year continues to show increases this year. However, the production has been increased in recent months so that the stocks at the end of August were 35 per cent greater than they were on the same date in 1932. The stocks of light distillates and gas oils also are higher than they were a year ago. Stocks of these products a year ago were exceptionally low and present inventories are in line with normal conditions at this season of the year.

The report showing an increase of 18 per cent in the demand for fuel oil and gas oil is in line with the data obtained from individual companies. Stocks for the country as a whole are 4.4 per cent lower. The demand for lubricants, especially in the industrial end, is showing a marked improvement over a year ago.

The strongest of the products is wax. The export and domestic demand for wax in August was 58 per cent greater than in August, 1932, climaxing an improvement which started earlier in the year. Stocks at the end of August were the lowest in several years. This strong situation between supply and demand coupled with low inventories accounts for the fact that the wax market is strong with the bulk of the output sold for the remainder of the year.

East Coast Situation

The refinery stock situation in this territory for the most part is in line with that for the entire country, as shown in the following table:

	August 31, 1932	August 31 1933	Decr. 1933 (pct.)
Motor fuel ...	15,911,000	13,629.000	14
Kerosene	1,449,000	2,199,000	*51
Gas oil and fuel oil	9,191,900	9,503,000	*3 4
Lubricants ...	2,596,000	2,266,000	12
Wax (lbs.) ...	57,982,000	20,905,000	64

*Increase.

This report shows a substantial decrease in motor fuel and lubricating oils stocks for this section of the country with wax stocks reduced to a minimum at the start of September when many buyers

(Continued on Page 31)

American Petroleum Institute Weekly Refinery Statistics

Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Total motor fuel stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

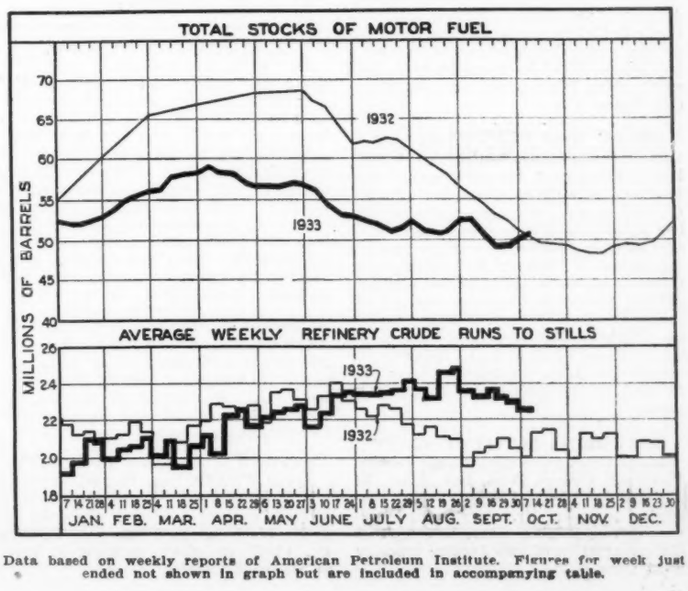
Week Ending October 14, 1933, Compared to Week Ago

	Week Ending Oct. 14, 1933 (1)	(2)	(3)	(4)	Week Ending Oct. 7, 1933 (1)	(2)	(3)	(4)
East Coast	100.0	466,000	13,945,000	9,336,000	100 0	472.000	13,525.000	9,363.000
Appalachian ...	92.6	104,000	1,928,000	894,000	92.6	85,000	1,840.000	851,000
Ind., Ill., Ky. ...	97.3	338,000	7,364,000	6,009,000	97 3	326,000	6,958.000	5,841,000
Okla., Kans., Mo.	82.1	242,000	5,382,000	4,302,000	82.1	244.000	5,293.000	4,259.000
Inland Texas ..	60 2	90,000	1,335,000	1,832,000	60 2	87,000	1,336.000	1,810,000
Texas Gulf	98.0	444,000	5,548.000	6,869.000	98 0	465,000	5,813,000	6,748,000
Louisiana Gulf..	100 0	97,000	1,264,000	1,996.000	100.0	87,000	1,291.000	1,851,000
N. La. and Ark.	92.6	48,000	252,000	630.000	92 6	47,000	246.000	657,000
Rocky Mnt.	78 8	37,000	852,000	710,000	78.8	33.000	800.000	789,000
California	96.9	437,000	14,129,000	98.334.000	96.9	406,000	13,971.000	98,957.000
Total U. S. ..	92 4	2,303,000	51,999,000	130,912,000	92.4	2,252,000	51,073,000	131.046.000

Total motor fuel stocks Bureau of Mines basis 53,800,000 bbls.

Week Ending October 14, 1933, Compared to Year Ago

	Week Ending Oct. 14, 1933 (1)	(2)	(3)	(4)	Week Ending Oct. 15, 1932 (1)	(2)	(3)	(4)
East Coast	100.0	466,000	13,945,000	9,336,000	99 1	464.000	13.332.000	9,314,000
Appalachian	92.6	104,000	1,928,000	894,000	95 0	92.000	1.624.000	823,000
Ind., Ill., Ky. ...	97.3	338,000	7,364,000	6,009,000	97 5	303,000	6,215,000	4,160,000
Okla., Kans., Mo.	82.1	242,000	5,382,000	4,302,000	88.4	218,000	4,528.000	3,054,000
Inland Texas ..	60 2	90,000	1,335,000	1,832,000	72 1	92 000	1,388.000	2,042,000
Texas Gulf	98.0	444,000	5,548.000	6,869.000	98.2	388,000	4,870.000	10.461,000
Louisiana Gulf..	100 0	97,000	1,264,000	1,996.000	97 3	83,000	1,477.000	4,052,000
N. La. and Ark.	92.6	48,000	252,000	630.900	94 6	43,000	173.000	524,000
Rocky Mtn.	78 8	37,000	852,000	710.000	91.4	31.000	1,218.000	474,000
California	96.9	437,000	14,129,000	98.334.000	94 6	424,000	14,954.000	100,959,000
Total U. S. .	92 4	2,303,000	51,999,000	130,912,000	93.6	2,138,000	49,779,000	135,863,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table.

NEWS FOR PETROLEUM REFINERS

Mellon Institute Speaker Predicts Quality Contest

By R. C. CONINE

PITTSBURGH, Pa., Oct. 16.—Refiners are preparing for another quality race which may equal in intensity and influence the motor fuel antiknock campaign which eventuated in the introduction of "Q" tetraethyl lead fluid in competitive grade gasolines, according to A. W. Gruse, senior industrial fellow of Mellon Institute of Industrial Research, speaking before a group of the technical division of the National Petroleum Association here. The impending race will be in connection with the improvement of lubricating oils, particularly in respect to the viscosity-temperature curve. Mr. Gruse outlined the progress of solvent applications in the extraction of lubricating oil elements responsible for low viscosity index, sludging (rapid oxidation), or affecting pourpoint.

Lubricating oils made from Pennsylvania grade crude oil, Mr. Gruse said, should satisfy the requirements of the most discriminating motorist. It was pointed out that Pennsylvania refiners are closely in touch with the latest developments in lubricating oil production, although this field has expanded greatly in the last few months. Mr. Gruse enumerated 8 solvents now used in producing higher viscosity index oils, and stated that at least 50 more solvents would come to the attention of the industry within a short time. Those discussed were sulphur dioxide, nitrobenzene, phenol, duosol, chlorex, furfural, crotonaldehyde and a mixture of sulphur dioxide and benzene.

Mr. Gruse touched upon some of the recent dewaxing processes such as the propane method of Standard Oil Co. (Indiana), and recounted briefly the Gover method of the Texas Co. in which a mixture of benzene and acetone aids in the chilling and filtering of the product. He also discussed the Swedish centrifuging process now used to some extent by Standard Oil Co. of New Jersey.

THIRD REFINERY MAY BE BUILT

MOUNT PLEASANT, Mich., Oct. 16. Negotiations for a third refinery in Central Michigan to be erected at Clare to run oil produced in the Vernon Township, Isabella County, Pool, located about 4 miles south of this city, are reported. Beaty & McPherson, of Detroit, are said to have opened conferences with Clare business men and have sought an option on the John Rudy farm just west of the city limits.

DERBY MEN INSPECT PLANT

WICHITA, Kans., Oct. 16. — Following a meeting of the directors of the Derby Oil & Refining Corp., here the officials inspected the company's $3,000,000 refinery in Wichita, the Derby terminal plant in McPherson and the producing areas of Harvey and McPherson Counties where the company operates important properties. Directors from out of town were R. E. Wilsey, Chicago; Berkeley Williams, Richmond, Va., and Austin F. Barry of New York. Resident directors are A. L. Derby, president; W. E. Jett, C. G. Yankey and E. C. Claiborne.

GRAY JOINS ALTITUDE STAFF

M. E. Gray, formerly with the Jenkins Petroleum Process Corp., has joined the Altitude Petroleum Corp. as chief consulting engineer. Mr. Gray recently returned from Belgium where he completed the construction of two Jenkins cracking units there.

Refiners Planning to Make New Oils for Winter Operation of Automobiles

Two new oils, designated as 20-W and 10-W, are being recommended by automotive manufacturers in their instruction books for 1934 and refiners are planning to supply these oils for trial and use during the coming winter.

The ease of starting an automobile engine depends largely upon the cranking speed, which in turn is controlled by the viscosity or fluidity of the engine crankcase oil. All oils become more viscous and do not flow as readily at low temperatures as at high temperatures. If the oil becomes too thick or too high in viscosity at low temperatures it will be difficult or impossible to start the engine.

S.A.E. 20 and S.A.E. 10 oils are classified in accordance with their viscosity or fluidity at 130° F. This practice of classifying winter oils at summer temperatures has resulted in a wide variation in the viscosity or fluidity of the commercial oils sold under these S.A.E. numbers at the starting or cranking temperature. To avoid the wide difference in the temperature at which an engine can be started with oils of the same S.A.E. number, the new 20-W and 10-W oils are classified according to their viscosity or fluidity at 0° F.; in other words, their ability to permit easy starting within the temperature range for which they are recommended.

The classification for these two new oils is as follows:

	Viscosity at 0° F.	
	Maximum	Minimum
20-W	40,000	10,000
10-W	10,000	5,000

S.A.E. 30 oil is recommended as heretofore for summer use and where the minimum temperature does not fall below 32° F. The new 20-W oil is recommended for use where the minimum temperature at which the engine is to be started will be below 32° F. but where the minimum temperature does not fall below 0° F. For regions where the minimum temperature at which the engine is to be started is below zero, but is not below 15° below zero, the new 10-W is recommended. For temperatures lower than 15° below zero 10-W should be diluted with 10 per cent kerosene.

Pourpoint does not affect the starting characteristics of the oil, but it does determine whether the crankcase oil can be circulated by the oil-distributing system and be delivered to the bearing surfaces. During the winter 20-W, with a zero pourpoint, and 10-W, with a subzero pourpoint, are recommended.

These new oils, which are being recommended by the motor car manufacturers for use during the winter under the climatic conditions outlined above, will greatly reduce engine wear, will lubricate the engine satisfactorily under all driving conditions and will lessen starting difficulties. However, under prolonged high speed driving, the oil consumption will be higher than with the heavier oils generally recommended for use during the summer months.

All oils decrease in viscosity and become much more fluid when heated. Since the ease of starting is controlled by the viscosity or fluidity of the oil at the starting temperature and the consumption by the viscosity at the operating temperature, the selection of an oil for winter operation becomes a compromise between easy starting and oil consumption. Under the normal average driving and road conditions which prevail during the winter any of the commercial automobile engine crankcase oils which meet the requirements for 20-W and 10-W should give satisfactory oil mileage. In exceptional cases where the car is driven at extremely high speeds for prolonged periods and where oil consumption is the most important consideration, and especially where cold starting is not a factor as in cases where cars are kept in warm garages, the use of a heavier oil may be recommended.

These new classifications are now being intensively studied by the lubricants division of the S.A.E. standards committee with a view to later adoption as S.A.E. numbers with such possible changes and modifications as further experience may show to be necessary. Many of the S.A.E. 10 and S.A.E. 20 oils fall within these classifications and may be used as 10-W and 20-W.

A. E. DUNSTAN TO SPEAK

Dr. A. E. Dunstan, chief chemist of the Anglo-Persian Oil Co., editor-in-chief of "Dictionary of Petroleum" to be issued by the Oxford Press, and past president of the Institute of Petroleum Technologists, will be the guest of honor of the Chicago Chemists Club at a luncheon during the American Petroleum Institute meeting, Wednesday, October 25, at the Stevens Hotel, 12:15 p.m. Doctor Dunstan will give a few impressions of the oil industry. Dr. Gustav Egloff, president of the Chicago Chemists Club, will preside.

ALBERTA REFINERY UNDER NRA

COUTTS, Alberta, Oct. 16. — The Northwestern Stellarene Co., Ltd., has placed its Canadian refinery here under the NRA code, adding 17 men to the staff and substituting a six-hour day for an eight-hour day.

MAVERICK COUNTY REFINERY

EAGLE PASS, Tex., Oct. 16.—Following three months' construction work a 3 0-bbl. refinery has been completed by J. H. Webb in the Texas Gas Utilities Co. Field, 19 miles northeast of here, in Maverick County.

TESTING METHODS COMPILED

"Petroleum Products and Lubricants," a new volume announced by the American Society for Testing Materials, 1315 Spruce Street, Philadelphia, Pa., brings together the many A.S.T.M. standard and tentative methods of test pertaining to petroleum and the 1933 report of Committee D-2 on petroleum products and lubricants. Fifty-one test methods are given, many of them approved by the American Standards Association and the American Petroleum Institute. Revisions in several of the standard methods adopted in 1933 by the society are given in their latest form and cover the following tests: Cloud and pourpoints, viscosity, flash and firepoints with open cup, and sulphur in petroleum oil heavier than illuminating oils. Tentative standards included, which were revised this year, cover the tests for penetration of greases and petrolatum and tests for bituminous emulsions. Several of the methods were adopted as standard this year, having previously been approved as tentative. The book contains 292 pages.

Copies are available in heavy paper cover from A.S.T.M. headquarters at $1.25.

Strike Retards Refinery Operations in Coal Area

OIL CITY, Pa., Oct. 16.—The strike in the coal regions of Pennsylvania has begun seriously to hamper and retard operations in the oil refining industry here. Most of the refineries in this region have been dependent for many years on their supply of coal from the southern Venango and Mercer County fields. With the mines in these regions practically dormant, owing to labor difficulties, some of the smaller refineries will be forced to close down in a few days. Larger companies report supplies of coal on hand sufficient for a month or six weeks.

SAFETY IN CRACKING PLANTS

Recognizing the inherent dangers in the processes of cracking petroleum oils, the U. S. Bureau of Mines recently published a report outlining the fundamental factors from the standpoint of safety which influence the design of equipment, the operation of plants, and the methods of inspection and maintenance to use to assure safety.

The process of cracking is accompanied by severe corrosive and erosive conditions which continually weaken the equipment. The extent of these effects should be determined at regular intervals by trained inspectors. Methods of inspection described include internal and external visual inspection, drill testing, the use of "tell-tale" test holes, calipering, and other measurements made without drill testing, such as hammer testing, tight-wire measuring apparatus, X-ray, stethoscope, and hydrostatic pressure testing. Of particular interest is a method of determining the wall thickness of reaction chambers by means of a tight-wire measuring apparatus, which is described in detail. Copies of the publication Technical Paper 551, "Safety at Petroleum Cracking Plants," by R. L. Marek, may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., price 10 cents.

EDMONTON PLANT COMPLETED

EDMONTON, Alberta, Oct. 16.—The Olsen Refining Co., headed by Lars R. Olsen, has completed in South Edmonton a refining plant of 1,000 bbls. capacity and with storage for 500,000 gallons of gasoline. It will start operations about November 1, turning out a full line of petroleum products. At present the company is marketing Turner Valley naphtha after blending and eliminating the sulphur, but contracts have been made for Oklahoma crude, which will be blended with Wainwright crude. Some Turner Valley naphtha also will be used. The plant is on the site of the old Alberta Refining Co. plant. Mr. Olsen formerly operated a refinery in Coutts, and later was associated with General Distributors, Ltd., in Calgary.

TO MAKE LUBRICATING OIL

SAN ANTONIO, Tex., Oct. 16.—The Benco Refining Co., a newly organized concern of which Henderson Coquat of Three Rivers, Tex., is one of the chief owners, has completed a refinery at Three Rivers for manufacturing lubricating oil. The capacity of the plant is 200 bbls. of finished product daily. Crude, it is understood, will be obtained from the Callihan Field, 14 miles west of Three Rivers.

PARCO REGISTERED IN ALBERTA

CALGARY, Ontario, Oct. 16.—Parco Oil Co., Ltd., has been registered in Alberta, with Daniel Lee Redman of Calgary as its attorney.

NEWS FOR SALES DEPARTMENTS

Road Oil Congress to Be Held This Week in Tulsa

Advantages of road oil in the construction of secondary highways will be discussed at the third National Road Oil Congress to be held October 19 and 20 in the Mayo Hotel, Tulsa.

The call for the congress was issued by W. E. Wood, Okmulgee, Okla., president of the Oklahoma Good Roads Association; Cyrus S. Avery, president of the Tulsa Chamber of Commerce, and George J. Stein, Miami, Okla., president of the congress. The object is to sponsor and lead a nationwide move toward the development of secondary and feeder roads.

Will Rogers, congressman at large from Oklahoma, is to speak on the development of highways as related to the appropriations of the last Congress. J. T. Pauls, senior highway engineer, Federal Bureau of Public Roads, will discuss factors in connection with low cost roads. F. S. Gilmore, assistant maintenance engineer of the Kansas Highway Commission, will present a paper on "Aspects of Road Oil Construction from the Materials Engineer's Viewpoint," and R. M. Heine, member of the American Association of Asphalt Technologists, will discuss "Asphalt Emulsions and Their Uses."

U. S. Senator Thomas P. Gore will address the congress Friday noon.

New Credit Ruling Allows Time to Adjust Accounts

WASHINGTON, D. C., Oct. 16.—Modfication of the credit terms embodied in the oil code so as to permit adjustment of accounts in default is announced in an order issued October 13 by Secretary Ickes. The order, effective for 75 days and giving the marketer 30 days in which to adjust weak accounts on a proper basis, follows:

"Pursuant to the authority vested in me by the President's order of August 28, 1933, issued pursuant to Section 2(b) of the National Industrial Recovery Act (Public No. 67, Seventy-third Congress) and by Section 2, 3, and 4(a) of Article 1 of the Code of Fair Competition for the petroleum industry approved by the President pursuant to such act, the provisions of Rule 5 of Article 5 of said code are hereby modified as follows for a period not to exceed 75 days from the date of this order:

"'Wherever, under the terms of Rule 5 of Article 5, any seller of petroleum or the products thereof is required to cease extending credit to any purchaser of such petroleum or the products thereof who has not made satisfactory settlement on a date specified in Appendix B to said rule, such seller shall be allowed a period of not more than 30 days from said final date of payment in which to effect collections; provided, however, that such seller shall, during this period, conscientiously endeavor to secure payment and establish the account on the proper basis of payment as to future purchases.'"

BIDS MUST CONFORM TO NRA

All bids for supplying petroleum products for post office business must be made in conformity with the NRA code according to a ruling sent by the Planning and Co-ordinating Committee to the committee's regional marketing committees. Failure will result in throwing out of the bids. Furthermore, acceptance of bids will be under condition that supplier conduct his business in accordance with the code.

Sharp Reduction in Gasoline Production Asked of Refiners by Committee

An analysis of the latest available information with respect to gasoline production and inventories shows that in the Indiana-Illinois-Kentucky, the Oklahoma-Kansas-Missouri, the Inland Texas, the Texas Gulf and the northern Louisiana and Arkansas refinery districts, as designated by the Bureau of Mines, the inventories of gasoline at the end of September, 1933, amounted to more than 20,000,000 bbls. and were at least 15 per cent in excess of the corresponding inventories of the same period of 1932.

The reports of the American Petroleum Institute also show that in September, 1933, the inventories of these districts were not reduced, whereas, under a normal trend, the inventories should be substantially reduced in September.

The effect of the excessive inventories of gasoline in these districts is clearly shown in the depressed tank car markets which have prevailed in spite of advances in crude oil prices and which jeopardize the maintenance of the crude oil price structure.

The situation requires a substantial draft in October and November on the gasoline inventories in these districts, but the reduction in crude oil runs to stills resulting from the reduction in total allowable crude oil production will not be sufficient to create even a moderate draft upon these excessive gasoline inventories.

Upon consideration of these facts, it is the judgment of the Planning and Co-ordinating Committee that the gasoline production in the aforesaid districts during the month of October, 1933, should be at least 12½ per cent less than the production during the month of September, and during the month of November should be at least 15 per cent less.

The Planning and Co-ordinating Committee, therefore, has issued a statement asking the refining companies in the aforesaid districts to reduce their gasoline production during October, 1933, at least 12½ per cent and during November, 1933, at least 15 per cent under the production for the month of September, 1933. Refining companies should take immediate steps to comply with this request.

The following resolution relative to net withdrawals of crude from storage has been adopted by the committee and approved by Secretary Ickes:

"It is the policy of this committee that when, as and if this committee requests refiners to curtail their crude runs for the benefit of the general situation, then in that event the crude run into storage by such refiners as a result of such requests and curtailment shall not be considered stored oil: Provided, however, that each case of net withdrawals shall be submitted to the committee with a complete statement of the facts, as required by the committee, verified by affidavit."

Marketers Holding Annual Convention in Kansas City

Oil marketers of Kansas, Missouri, Iowa and Nebraska are meeting in Kansas City, Mo., this week for their annual four states convention. The program opening Tuesday and closing Thursday, pays particular attention to interpretation of the oil code.

The program includes an address by Barney L. Majewski, member of the Planning and Co-ordinating Committee in Washington, D. C., on "The Oil Men's Code, What It Means and What the Government Expects It to Do." Mr. Majewski is vice president and sales manager of the Deep Rock Oil Corp. Carl Brick, secretary of the Co-operative Club, International, is on the program for a talk on "Co-operation Within the Industry," and Perry B. Armold, of the Armold Sales Training Institute of Los Angeles, on selling problems and methods.

The program of entertainment planned by the Oil Men's Club of Kansas City includes a dinner dance.

TO OPERATE SERVICE STATIONS

RALEIGH, N. C., Oct. 16.—The Superior Petroleum & Fuel Co., Inc., with principal offices in Newton, has filed a certificate of incorporation here to operate filling stations for the sale of petroleum products and automobile accessories. Authorized capital stock is $100,000. The incorporators are Carl M. Barringer, J. Jordan Berringer and James Moretz, all of Conover, N. C. Carolina Service, Inc., with principal offices in Charlotte, has been incorporated similarly to operate service stations. Authorized capital stock is 1,000 shares without par value. Incorporators are L. A. Love, J. H. Quattlebaum and J. K. Kindley, all of Charlotte.

Want Ickes Enjoined From Enforcing NRA Provisions

WASHINGTON, D. C., Oct. 16.—Enforcement of the NRA oil code was attacked from a new quarter with the serving of an order on Secretary of the Interior Ickes, oil administrator, to show cause why he should not be enjoined from interfering with the marketing practices of four Detroit, Mich., dealers and distributors of oil and petroleum products.

A suit in equity was filed in the District Supreme Court by Victor & Silverman, the Duro Oil Co., the Johnson Oil Co., and the Otto Super Service of Detroit, attacking on constitutional grounds, Secretary Ickes' right to enforce the code marketing provisions which prohibit giving premiums as an inducement to buy their products. The suit must be answered by next Friday.

Secretary Ickes had ordered the four companies to stop the practice admitted in their bill of complaint, which asserted an investment has been made of several thousand dollars in coupons redeemable for glassware, earthenware and other premiums. The plaintiffs declared they do a "purely intrastate business."

It is on the constitutional question that the issue will be decided. Similarly, this question is involved in oil code violations throughout the country, which are being prepared for prosecution by Secretary Ickes' legal staff and the Department of Justice.

TAXES HIT GASOLINE SALES

ATHENS, Ala., Oct. 16.—Athens gasoline dealers report that gasoline sales in this county are falling off on account of the high state and county gas taxes, many tourists tanking up in Tennessee before crossing the line. Many car owners have put up their cars, it is reported.

Estimated July Sales Are Less Than Those for June

Gasoline consumption in July, 1933, exceeded that in the corresponding month of 1932 by 53,569,000 gallons, according to figures compiled by the American Petroleum Institute. The indicated consumption in July, this year, was 1,434,518,000 gallons as compared with 1,380,949,000 gallons in July, 1932.

In conflict with ordinary seasonal trends, however, the indicated July consumption this year shows a decrease of 73,451,000 gallons from the June consumption, estimated as 1,507,969,000 gallons. No completely satisfactory explanation of this falling off appears on the surface, for under normal conditions the July consumption should be higher than that of June since the season of vacations and touring is well on its way in July to its customary peak in August.

One deterrent to the usual freer use of automobiles in July, this year, is seen in the rising price of gasoline, accounted for in part by the increase of one-half cent a gallon in the Federal tax. The most pronounced drop in consumption as between these two months is indicated in California, where an indicated June consumption og 125,205,000 gallons contrasts with 111,792,000 gallons in July, a difference of 13,413,000 gallons. New York, however, the heaviest consumer in the Union, is estimated to have used 5,520,000 gallons more in July than it did in June.

The consumption estimate by states in June, 1933, and June, 1932, based upon the quantity of gasoline sold or offered for sale as reported by wholesalers and retailers under the tax or inspection laws, follows:

	Gallons	
	July, 1933	July, 1932
Alabama	10,997,000	11,595,000
Arizona	5,430,000	5,322,000
Arkansas	10,452,000	9,389,000
California	111,792,000	104,174,000
Colorado	14,759,000	12,836,000
Connecticut	25,089,000	23,566,000
Delaware	4,619,000	4,572,000
Dist. of Columbia	9,953,000	9,178,000
Florida	14,355,000	15,028,000
Georgia	17,852,000	16,682,000
Idaho	5,419,000	5,026,000
Illinois	92,369,000	88,568,000
Indiana	39,600,000	37,365,000
Iowa	31,766,000	29,548,000
Kansas	35,455,000	36,701,000
Kentucky	15,235,000	15,025,000
Louisiana	12,853,000	13,078,000
Maine	12,544,000	12,869,000
Maryland	17,235,000	17,273,000
Massachusetts	56,441,000	54,652,000
Michigan	71,791,000	69,224,000
Minnesota	38,614,000	36,613,000
Mississippi	9,526,000	8,075,000
Missouri	40,120,000	36,765,000
Montana	7,516,000	6,163,000
Nebraska	18,035,000	16,151,000
Nevada	2,294,000	2,110,000
New Hampshire	7,468,000	7,181,000
New Jersey	66,875,000	63,867,000
New Mexico	4,400,000	4,128,000
New York	154,565,000	152,775,000
North Carolina	20,264,000	20,424,000
North Dakota	11,458,000	8,999,000
Ohio	80,549,000	75,809,000
Oklahoma	22,565,000	22,870,000
Oregon	14,306,000	13,913,000
Pennsylvania	100,566,000	93,376,000
Rhode Island	9,570,000	9,490,000
South Carolina	9,803,000	8,815,000
South Dakota	9,193,000	10,256,000
Tennessee	15,082,000	15,403,000
Texas	65,700,000	67,420,000
Utah	5,577,000	6,283,000
Vermont	4,959,000	5,087,000
Virginia	20,369,000	19,983,000
Washington	21,352,000	20,587,000
West Virginia	12,715,000	11,415,000
Wisconsin	41,320,000	41,772,000
Wyoming	3,837,000	3,738,000
Total	1,434,519,000	1,380,949,000
Daily average	47,275,000	44,547,000

SINCLAIR BUILDS IN RICHMOND

RICHMOND, Va., Oct. 14.—A permit has been issued to the Sinclair Refining Co. to build a brick service station at 4031 Rappahannock Street to cost $4,500.

NATURAL GASOLINE MANUFACTURE

Refiners Take 11.5 Per Cent Less From Mid-Continent

In the first eight months of this year natural gasoline plants in the Mid-Continent produced 9.7 per cent less gasoline and their refinery customers took 11.5 per cent less than for the period a year ago. Stocks at the beginning of September were 31.4 per cent higher at natural gasoline plants but refinery stocks of natural were 12.1 per cent less. These data are the conclusions of the Western Petroleum Refiners Association based upon Bureau of Mines reports.

However, in studying the local problem of balancing supply and demand it is known that substantial changes have been made in the status of stocks in the meantime. This change is the result of the abnormal movement of natural from the Mid-Continent to the Gulf Coast. In this connection it is significant that the actual consumption of refiners during the first eight months of this year located on the Gulf Coast is considerably under that of the same period a year ago. Those in Texas along the coast have consumed 24.4 per cent less natural, and those in Louisiana have reduced their purchases 73.7 per cent. The above figures do not reflect the increasing volume of natural gasoline moving unblended into the export and coastwise trade.

MID-CONTINENT NATURAL GASOLINE STATISTICS

(Quantities in thousand of gallons)

Stocks at Mid-Continent Plants, August 31	First 8 mos. 1932	First 8 mos. 1933	Percentage change
Oklahoma	11,898	17,212	+44 7
Kansas	996	1,850	+85.7
Texas	7,079	7,393	+ 4 4
Louisiana	576	685	+18.9
Arkansas	242	169	—30 2
Total	20,791	27,309	+31 4
Production			
Oklahoma City	53,100	56,400	+ 6.2
Osage County	32,700	27,100	—17 1
Seminole County	90,000	64,200	—28 7
Rest of State	82,700	85,300	+ 3 1
Oklahoma total	258,500	233,000	— 9.9
Kansas total	16,800	14,900	—11 3
Panhandle	123,100	111,800	— 9.2
North Texas	20,800	13,200	—36 5
West Central	57,500	56,000	— 2.6
Rest of State	47,900	50,200	+ 4.8
Texas total	249,300	231,200	— 7.3
Louisiana total	32,700	25,700	—21 4
Arkansas total	13,100	10,300	—21.4
Total	570,400	515,100	— 9.7
Shipments From Plants			
Oklahoma	255,337	221,499	—13 3
Kansas	16,232	13,460	—17 1
Texas	248,236	230,195	— 7.3
Louisiana	33,362	25,730	—22.9
Arkansas	13,060	10,295	—21.2
Total	566,267	501,179	—11.5
Stocks at Refineries, August 31			
Okla. and Kans.	966	714	—26.1
Inland Texas	252	252	....
Coastal Texas	7,014	6,174	—12.0
N. La. and Ark.	126	210	+66.7
Coastal La.	none	none	....
Total	8,358	7,350	—12 1
Used by Local Refineries			
Okla. and Kans.	123,732	128,562	+ 3 9
Inland Texas	77,700	89,208	+14 8
Coastal Texas	93,240	70,140	—24 8
N. La. and Ark.	24,192	11,718	—51.6
Coastal La.	30,114	7,896	—73 8
Total	348,978	307,524	—11.9
Local Refinery (Receipts)			
Okla. and Kans.	123,480	128,352	+ 3.9
Inland Texas	77,742	89,292	+14.9
Coastal Texas	88,788	67,116	—24 4
N. La. and Ark.	24,066	11,760	—51.1
Coastal La.	30,030	7,896	—73.7
Total	344,106	304,416	—11 5
Excess Production Over Local Refinery Demand			
Okla. and Kans.	151,820	119,548	—21 3
Texas	82,770	74,792	— 9 6
La. and Ark.	8,296	16,344	....
Total	326,394	210,684	— 6.9

Natural Gasoline Production Increases While Stocks at Plants Show Decline

Natural gasoline production increased in August for the second consecutive month this year according to the latest report of the Bureau of Mines. The total output for the month was 118,600,000 gallons compared with 116,300,000 gallons in the previous month. Even though there has been slightly more natural gasoline produced in each of the last two months as shown by these reports, the total for the first nine months of 1933 remains 100,000,000 gallons short of the production for the same period last year.

Stocks of natural gasoline at manufacturing plants declined during the month so that by September 1 they stood at 35,577,000 gallons. On the first of the previous month they were 39,911,000 gallons. The principle reduction in stocks occurred in Texas plants. Here they were reduced from 9,701,000 gallons on the first of the month to 7,393,000 gallons by the close. The greater share of this reduction came in the Panhandle.

The reduction in the stocks at natural gasoline plants does not give a true picture of the status of all stocks, however. Total stocks, including those held by refiners and at terminals, increased slightly for the month. The increase approximated 56,000 bbls.

Although there is no division of stocks by areas, to show such a change, it appears reasonable to assume that much of the larger reduction in the Panhandle was due to a shifting of storage from plants there to the Gulf Coast. It is known that export shipments for the past 60 days have been considerably above normal and the early movement of stocks to the coast probably were in anticipation of the business.

East Texas continues to show the same rate of output. That area has produced approximately 1,900,000 gallons per month for the past three months. As new plants are added, there has been a corresponding reduction in the crude produced under the new allowables and the two factors have cancelled each other's influence.

PRODUCTION AND DISTRIBUTION

(Thousands of barrels)

	August, 1933 Total	August, 1933 Daily av.	July, 1933 Total	July, 1933 Daily av.	Jan.-Aug., 1933	Jan.-Aug., 1932
Production	2,824	91	2,769	89	21,902	24,650
Decrease in all stocks	.....	.....	42	1	.. ..	.....
Total	2,824	91	2,811	90	21,902	24,650
Blended at refineries	1,955	63	1,755	57	14,590	15,743
Blended at plants east of Calif.	12	.....	9	.....	75	25
Run through pipe lines in Calif.	104	3	105	3	823	888
Jobbers, exports, etc.	373	12	536	17	3,535	4,152
Increase in all stocks	57	2	.....	.....	576	872
Losses	323	11	406	13	2,303	2,979
Total	2,824	91	2,811	90	21,902	24,650

PRODUCTION OF MOTOR FUEL BY METHODS

(Thousands of barrels)

	August, 1933 Total	August, 1933 Daily av.	July, 1933 Total	July, 1933 Daily av.	Jan.-Aug., 1933	Jan.-Aug., 1932
Refinery gasoline:						
Straightrun	17,987	580	17,704	571	130,425	133,810
Cracked	16,478	532	17,012	549	118,986	114,736
Natural gasoline:						
Production	2,824	91	2,769	89	21,902	24,650
Deduct losses	323	11	406	13	2,303	2,979
Benzol	171	6	163	5	925	705
Total motor fuel	37,137	1,198	37,242	1,201	269,935	270,921

PRODUCTION AND STOCKS BY FIELDS

(Thousands of gallons)

	Natural gasoline: Production Aug., 1933	July, 1933	Jan.-Aug., 1933	Jan.-Aug., 1932	Stocks end of month: Aug., 1933	July, 1933	Blended motor fuel August, 1933: Natural gasoline used	Naphtha or other oils used	Stocks end of month
Appalachian	3,500	3,500	38,400	40,400	3,957	4,769	53	35	33
Ill., Ky., Ind.	600	600	5,300	5,900	427	561	...	...	...
Oklahoma	31,800	31,600	233,000	258,500	17,212	18,379	43	91	33
Oklahoma City	8,600	8,300	56,400	53,100	5,496	5,690	...	...	26
Osage County	3,400	3,400	27,100	32,700	3,390	3,107	2	3	7
Seminole	9,000	8,900	64,200	90,000	5,548	6,344	1	...	...
Rest of State	10,800	11,000	85,300	82,700	2,778	3,238	40	88	...
Kansas	1,600	1,600	14,900	16,800	1,850	1,601	27	6	23
Texas	29,800	28,800	231,200	249,300	7,393	9,701	254	569	93
East Texas	1,900	1,900	12,300	5,800	137	123	242	568	87
North Texas	1,500	1,500	13,200	20,800	517	759	...	...	...
West Central	7,500	7,300	56,000	57,500	2,509	2,845	11	..	8
Panhandle	14,300	14,500	111,800	123,100	2,715	4,291	1	1	...
Rest of State	4,600	4,600	37,900	42,100	1,515	1,683	...	...	...
Louisiana	3,000	3,100	25,700	32,700	685	871	110	....	42
Arkansas	1,300	1,200	10,300	13,100	169	207	34	64	28
Rocky Mountain	4,500	4,500	36,600	40,900	1,380	1,101	...	..	...
California	42,500	40,400	324,500	377,700	2,524	2,621	...	...	...
Huntington Beach	2,800	2,200	14,100	11,400	...	...	...	...	...
Kettleman Hills	9,900	8,700	83,700	91,000	...	...	...	...	...
Long Beach	7,600	7,600	57,600	77,900	...	...	...	...	...
Santa Fe Springs	7,200	7,400	56,500	68,700	...	...	...	...	...
Ventura Avenue	3,000	2,800	25,200	29,000	...	...	...	...	...
Rest of State	12,000	11,700	87,400	99,700	...	...	...	...	...
Total	118,600	116,300	919,900	1,035,300	35,577	39,911	521	765	234
Daily average	3,830	3,750	3,790	4,240	...	...	17	25	...
Total (thous. of barrels)	2,824	2,769	21,902	24,650	847	950	12	18	6
Daily average	91	89	90	101	...	...	...	...	...

Manufacturers Ask for Separate Code Committee

Many of the natural gasoline manufacturers in the Mid-Continent area feel their problems under the general oil code will not be given as quick and effective handling as if that branch of the industry were provided with a separate committee as has been done for each the production, manufacturing, transportation and marketing divisions. This same feeling has been made evident in opinions expressed by natural gasoline manufacturers and marketers in the Appalachian, California and Gulf Coast areas.

It will be remembered that the oil code is intended to regulate the routine of all branches in the industry and makes rather specific provisions for hours of labor, pay, classification of work, reasonable charges, etc., in the case of these four branches but ignores the natural gasoline division except to say that it shall be included under the general regulations.

Fortunately or unfortunately, the natural gasoline industry is closely allied with each of the four branches. Because of this close alliance, it is easy for that division to lose its identity, especially if it is thought of as simply a part of the integrated company.

But the natural gasoline industry is made up of many units not a part of integrated oil companies. Approximately 20 per cent of the yearly output of plants comes from plants operated by public utilities having as their principal business the supplying of gas to cities. Another 15 to 20 per cent of the output comes from units entirely independent of all other phases of the petroleum industry. As the result, from 35 to 40 per cent of the natural gasoline industry is expected to abide by the general terms of a code designed essentially to fit the routine of integrated companies.

While there is no thought of objecting to any specific provisions in the code by any group, it is easy to see that in time it is going to be necessary to consider problems arising under the code that are 100 per cent natural gasoline in nature.

As an example, the question may arise as to the cost of manufacture and sales expense involved in the retailing of low vapor pressure natural gasoline in direct competition with refinery gasoline. The importance of this problem will become more significant if some system of price regulation is adopted by the Federal administrator.

In an attempt to prepare for the quick solution of this and other problems a move has been started to get the sanction of the Planning and Co-ordinating Committee of 15 to permit the appointment of a representative regional committee in each of important natural gasoline producing areas which will co-operate with the Planning and Co-ordinating Committee.

This committee, if sanctioned, could offer guidance also in the matter of allocating the volume of natural gasoline to be manufactured to bring about a balance between supply and demand, specify the grades of gasoline to manufacture to meet seasonal needs and establish such limitations with respect to exports, imports and coastwise shipments as might be found expedient to make the application of the general oil code most effective.

ADD TWO UNITS

The Pure Oil Co. has added two type X Bessemer compressors to its plant in the Van Field of Texas and has brought the total number of units to 21.

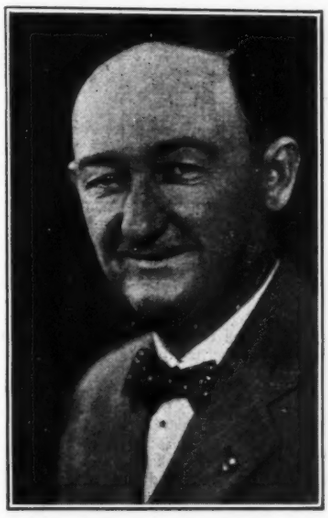
M. Moran Retires After Long Service; McGoldrick and Hill Are Advanced

The Texas Pipe Line Co. of Oklahoma on Saturday, October 15, announced the resignation of Martin Moran, president of the company for many years, and the appointment of John K. McGoldrick, vice president and general superintendent, to

MARTIN MORAN

the position vacated by Mr. Moran. Jesse H. Hill, general attorney, was advanced to the office of vice president and director, but will continue as the company's general attorney.

Mr. Moran submitted his resignation on October 2, after 56 years of continuous service as a pipe line man. He was one of the oldest, if not the oldest, active



JOHN K. McGOLDRICK

official among the large companies in the oil industry. The resignation was accepted but Mr. Moran was prevailed upon to remain on the board of directors.

Martin Moran, who was chosen as "the grand old man of the oil industry" at the International Petroleum Exposition, was one of the most widely known men in the business of crude oil transportation, and considered one of the best of a long list of veteran pipe line men who have graced the pages of oil history. He was born in 1857 in Portage, Wyoming County, New York, not many miles from the Allegany and Bradford Fields, and when a youth obtained work on a pipe line construction gang working near Olean, N. Y. It was a Standard Oil Co. pipe line and for the next 29 years Mr. Moran served that company in New York, Pennsylvania, West Virginia, Ohio, Indiana, Illinois and Kansas, receiving one promotion after another as he served one or another of the Standard's system of pipe lines.

When the Glenn Pool was opened in Oklahoma late in 1906 and gave promise of being one of the country's largest oil fields, The Texas Co. decided to extend its pipe line system from Texas to northern Oklahoma and Martin Moran was induced to leave the Standard Oil Co. and to take charge of The Texas Co.'s important Oklahoma project. He superintended the construction of the line which reached from the Glenn Pool on the border of Creek and Tulsa Counties down to the Red River, and in time was made president of the company which, during the 27 years, spread to many Oklahoma pools.

Four of Mr. Moran's six sons are in the oil business, Daniel J. Moran, president of the Continental Oil Co.; E. F.

JESSE H. HILL

Moran, drilling contractor; W. H. Moran, with the Texas Pipe Line Co., and W. B. Moran, with the refining division of The Texas Co.

John K. McGoldrick, the new president of the company, like Mr. Moran, started pipelining when a very young man. He was born in Scranton, in the Pennsylvania hard coal region, but was attracted to the oil region like many other eastern Pennsylvanians. He secured work with the Manhattan Oil Co. as a pipe line walker in Wood County, Ohio, later becoming a gauger, and telegraph operator in one of the company's pump stations. He was employed by the company in the Indiana fields when he decided to go to Kansas, a newly opened oil region. He joined the Prairie Oil & Gas Co.'s pipe line division at Neodesha in 1903, and continued with that company until the organization of the Texas Pipe Line Co. of Oklahoma, which he joined in 1907 as a gauger. He strapped that company's first tank connection in the Glenn Pool. Promotions followed until in 1917 he was made superintendent, and on March 3, 1931, was advanced to general superintendent and vice president.

Jesse Hill, the new vice president and director, is also a veteran with the company, joining it upon its organization. Mr. Hill was born in Louisiana but was reared in Parker County, Texas. He prepared himself for law in Weatherford, Tex., and was admitted to the bar in 1894. Four years later he moved to Ardmore, Indian Territory, but later went to Muskogee, where he practiced with the late S. M. Rutherford. The Texas Co. engaged him as right of way man for its Oklahoma line and then as one of its attorneys. He became chief counsel in Oklahoma for The Texas Co. and the Texas Pipe Line Co. of Oklahoma, and has been for years one of its principal representatives in the many counsels held by oil men. He has been active in the affairs of the Mid-Continent Oil and Gas Association and was one of the organizers of the American Petroleum Institute's industries committee.

NRA Code Constitutes Law of Texas, Judge Holds in Ouster Case Decision

AUSTIN, Tex., Oct. 16.—The Federal petroleum code "constitutes the law of Texas, the same as if enacted by the Texas legislature," and applied to acts complained of before its adoption because it had no saving clause to except them, District Judge J. D. Moore held in his written opinion, sustaining a general demurrer of oil companies to Attorney General James V. Allred's antitrust suit against 15 companies and two associations. He had announced orally his decision two weeks ago.

"The President's code," Judge Moore's written opinion held, "makes it legal, and even compulsory, to do the things mentioned in the code, and these are the same things challenged in the State's petition. If the defendants refuse to observe these sections of the President's code, they may be sued for penalties . ."

"The argument," his opinion said, "that the new statute must come from the same legislative power cannot be sustained. An act of Congress is a law of the State of Texas with the same effect as if enacted by the state legislature, the only difference being that, if valid, it has paramount authority.

"Suggestion has been made that the state law might be superseded as to future offenses, and yet the act of Congress might not be effective to release accrued penalties on account of past offenses. This could be true only if the act of Congress contained an appropriate saving clause. Since it contains no saving clause, then if the effect of the Recovery Act and the President's code is to make legal the acts complained of in the State's petition, if done now, the right to recover the accrued penalties has been lost.

"A good deal has been said about whether Congress intended to repeal the Texas antitrust law, or to supersede it. That inquiry is not material. The real inquiry is whether Congress intended to make legal the things of which the state complained in its petition.

"If the Federal act and the code promulgated thereunder are valid, and if they cover the same subject matter, in such a way and with such effect that if the acts complained of were done now, or in the future, they would not constitute a violation of the Texas statute, this case is at an end without regard to any intent of Congress to end it.

"The national government has ample power to attempt to correct nation-wide conditions threatening the absolute destruction of interstate and foreign commerce. It can do this within the constitution, for the Government within the constitution has all the powers granted to it which are necessary to preserve its existence.

"I have reached the conclusion that the general demurrer should be sustained. After the expiration or repeal of a law, no penalty can be enforced nor punishment inflicted, unless provision is made for that by statute."

Adjustments Are Needed in Mid-Continent Area

(Continued from Page 24)

geles the price was reduced 1½ cents; in Forth Worth, Tex., it dropped 5 cents in one day. In Chicago 2 and 3-cent differentials were increasing, and in the East the retail market has been admittedly weak for nearly a month. In several points within the central states price reductions have been recorded to indicate the unstable retail market conditions in this vast area.

With price fixing definitely established, the regional and state marketing committees will be called upon to enforce its provisions and the speed and effectiveness of their work will be a principal factor in making the entire plan a success. Their job has been made easier by the fact the Federal Government will enforce all plans for co-operative action to arrive at reasonably profitable returns for the industry.

Gasoline

Although the gasoline market took on an entirely different aspect Tuesday due to the coming of price fixing, actual quotations showed the low octane grade of U. S. Motor moving at 4 cents as the low. The efforts to go to higher ground were in evidence, however, as refiners withdrew from spot trading to await more settled conditions.

The regular and premium grades showed a reduction in price, the regular grade selling down to 5 cents but this condition is expected to be greatly altered within the next day or two.

Kerosene

Kerosene showed weakness early in the week and then on Tuesday the bulk of it was firmly held by the larger refiners for higher prices. The 41 grade was being traded at prices ranging between 3½ and 3¾ cents on Tuesday. All grades of distillate were equally strong on the basis of coming price control but earlier in the week, the market was not well supported.

Furnace Oils and Distillates

There was active trading in all grades of furnace oil and light distillates and the buying was coming from jobbers who had anticipated higher prices this winter whether price fixing was forthcoming or not.

Most of the large furnace oil buyers have large stocks of the material which was purchased early in the summer and spring so with current buying, a lull is expected in that market over the next month. Prices remained unchanged on Tuesday but showed every promise of advancing over the immediate future in sympathy with the better general tone of the market under the plan of regulating prices.

Lubricants and Wax

While no change in price was made in any of the neutrals or bright stocks, there was a tightening up of the loose ends in the structure, particularly in regard to the 200 viscosity, 3 colored grade of neutral oil that promised to place the entire list in a position for a future advance. Although no provision is made for the regulation of prices on lubricants it is apparent that that market will enjoy the same degree of improvement as refined oils in general.

Wax was tightly held for 3½ to 3¾ cents and manufacturers were not anxious to sell.

ELECTRIC POWER CLUB

The Petroleum Electric Power Club will hold its fifth annual conference at the Biltmore Hotel, Oklahoma City, November 16 to 18.

Develop Apparatus for Viscosity Measurement

(Continued from Page 17)

surfaces were made more nearly vertical. With the time of drainage being a linear function of the viscosity, if the head (H) is constant, the completeness of drainage should be approximately constant regardless of the viscosity, since the more viscous the oil is the more time there is for drainage. So, according to the investigators, if the drainage errors can be kept constant the correction may be included in the calibration constant, and, as the added factor might cause the calibration constant to vary slightly with the viscosity or time of efflux of the oil being tested if the drainage error were not constant, it is possible to eliminate the correction altogether by calibrating with a standard liquid of the same viscosity as the oil which is to be tested.

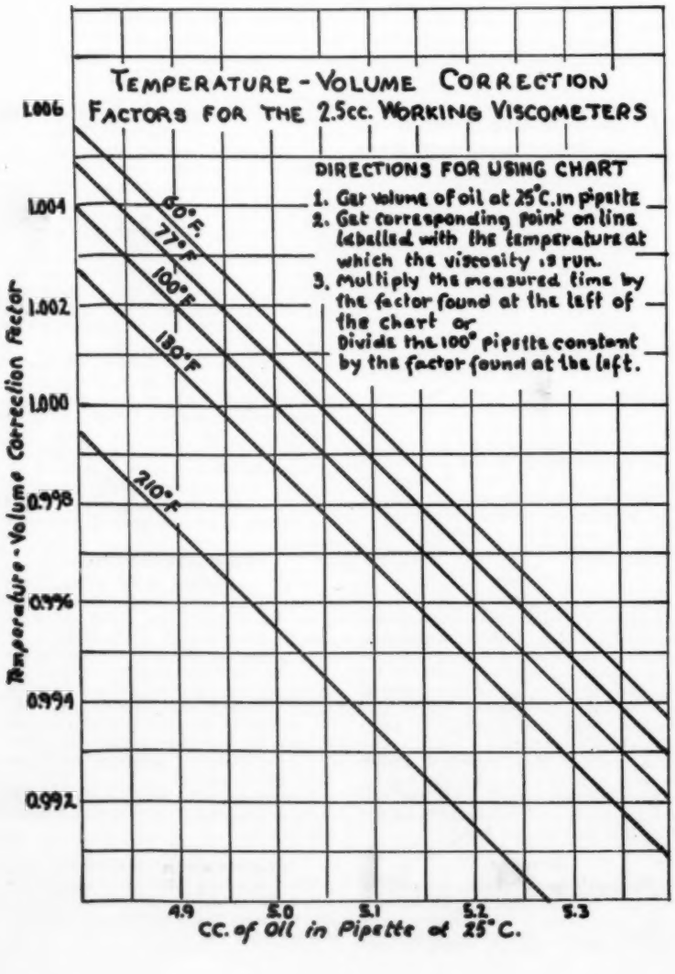
Effects of Tilting Minimized

To minimize the effects of tilting the pipette on the average effective head (H), the Ostwald design was modified placing one bulb directly over the other. The diameter of the lower bulb was made large so that the surface of the oil in this bulb would not rise appreciably to affect the effective head. In the matter of temperature correction, when the sample is weighed out at room temperature and the test made at 210° F., for example, there is a temperature-volume relation which must be considered, and a corrosion factor may be included in the viscometer constant (C), and that calls for a C for 100° F., and another for 210° F. The kinematic energy correction is the difference in the effective head and total head, and this loss of head (dh) is difficult to determine accurately. By increasing the length of the capillary and expanding the ends of the capillary gradually, the kinetic energy correction is minimized. It is likewise pointed out that the necessity for a kinetic energy correction can be avoided by calibrating the pipette with a standard liquid of about the same viscosity as that of the liquids whose viscosities are to be determined, the correction then being included in the calibration constant (C). The choking effect at the entrance of the capillary and the stream effect at egress are minimized likewise by the "trumpet ends" of the capillary. Calibration with the proper standard liquid lessens the surface tension correction.

Three viscometers were designed to cover the entire working range of tests. From the calculations for the different viscosity ranges to be worked the following capillary diameters were chosen: A capillary diameter of 0.07 cm. was found suitable for viscosities of about 4.6 to 46 centistokes, or 41 to 200 Saybolt seconds; a diameter of 0.12 cm. is suitable for viscosities of about 40 to 400 centistokes, or 185 to 1,800 Saybolt seconds; and a diameter of 0.16 cm. is suitable for viscosities of about 125 to 1,250 centistokes, or 560 to 5,500 Saybolt seconds. These diameters were chosen for three different series of pipettes, each to be used only in its own viscosity range.

Further specifications of viscometers for different oils, from report to the Pennsylvania Grade Crude Oil Association:

Viscometer series number	100	200	300
Working volume, cc.	2.5	2.5	2.5
Capillary length, cm.	7.0	7.0	7.0
Capillary diameter, cm.	0.07	0.12	0.16
Useful viscosity range (0.1 per cent error):			
Centistokes	4.6–45	40–400	125–1,250
Saybolt seconds	41–200	185–1,800	560–5,500
Useful viscosity range (0.1-1.0 per cent error):			
Centistokes	1.4–4.6	4.0–40	12.5–125
Saybolt seconds	33–41	39–185	68–560


TEMPERATURE - VOLUME CORRECTION
FACTORS FOR THE 2.5cc. WORKING VISCOMETERS
DIRECTIONS FOR USING CHART
1. Get volume of oil at 25°C. in pipette
2. Get corresponding point on line labelled with the temperature at which the viscosity is run.
3. Multiply the measured time by the factor found at the left of the chart or Divide the 100° pipette constant by the factor found at the left.
60° F.
77° F
100° F
130° F
210° F
Temperature - Volume Correction Factor
1.006
1.004
1.002
1.000
0.998
0.996
0.994
0.992
4.9
5.0
5.1
5.2
5.3
cc. of Oil in Pipette at 25° C.

Hydrocarbon Mixtures as Related to Production

(Continued from Page 15)

the heating or cooling of a vapor, calculate the heat effect on the assumption that the operation is conducted at pressures low enough to neglect deviations from the gas laws and then at each end of the operation apply a pressure correction the magnitude of which depends upon the reduced volume as shown in the following equation. The term, ϕ, is given by Figure 7. Note that its negative value is plotted in the figure. The isothermal pressure correction to the internal energy is

$$E = \mu_c RT_c \phi$$

Hence to calculate the change in internal energy due to pressure alone, for hydrocarbons with more than 3 carbon atoms per molecule, multiply the difference in the ordinate reading of Figure 7 corresponding to the actual change in V_R by the term $\mu_c RT_c = 0.264\ RT_c$. Its evaluation requires knowledge of T_c for the hydrocarbon in question.

Fugacities

For the computation of the reversible, isothermal work of compression of a perfect gas one uses the familiar formula, $W = nRT \ln p_2/p_1 = p_1 v_1 \ln p_2/p_1$. In view of the large deviations from the gas laws at high pressures indicated by Figure 4, it is not surprising to find that this equation breaks down completely under these conditions. If, however, one will use in it under the logarithmic term a properly corrected pressure, f, the equation can still be employed in this form for the exact calculation of isothermal reversible work. It thus becomes $W = nRT \ln f_2/f_1$. At pressures low enough so that the deviations from the gas laws are negligible, correction of the pressure is unnecessary and f becomes numerically identical with p. The pressure thus corrected is called the fugacity. It is easily shown that for compounds conforming to Figure 4, the ratio of the fugacity of the material under given conditions to its pressure, f/P is a function of the reduced temperature and reduced pressure only. This function has been computed and is presented graphically in Figure 8. From this figure, if one knows the reduced pressure and temperature of the material, one is immediately in a position to read off this ratio, f/P, and by multiplying by the pressure to obtain the fugacity, f, itself.

While the fugacity is a convenient function for calculating the work of isothermal, reversible compression, its utility is far greater than this, as will appear from further discussion.

It is well again to emphasize the fact that in order to use all these relationships, at least above the pressure range in which deviations from the gas laws may be neglected, one must know the critical temperature and pressure of the hydrocarbon with which one is dealing, in order to be able to calculate the reduced temperatures and pressures, knowledge of which is essential for solution of the problem. Furthermore, unless the critical condition of the hydrocarbon in question has been determined experimentally, it must be evaluated by indirect relationships, and for this evaluation one usually requires the knowledge of three characteristics of the hydrocarbon, of which the most convenient are its atmospheric boiling point, its density at that temperature, and its molecular weight. It is important to form the habit of securing these three items of data concerning any hydrocarbon in the behavior of which one is interested.

It is well to emphasize the fact that the relations discussed up to this point apply only to pure hydrocarbons and cannot be applied directly in these forms to mixtures.

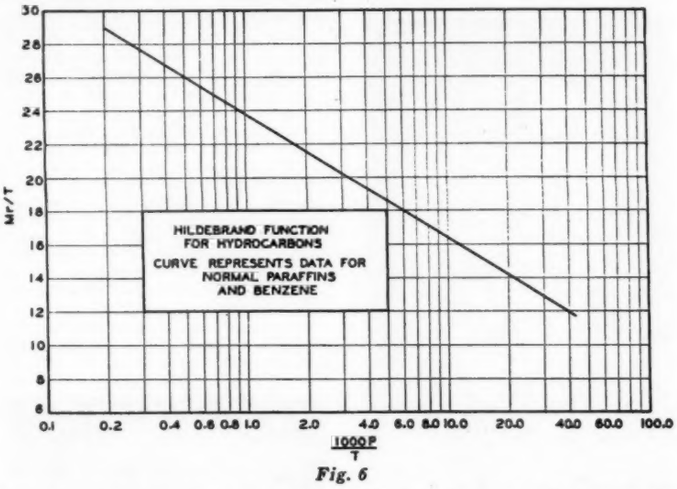


Fig. 6

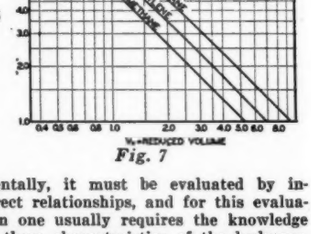


Fig. 7

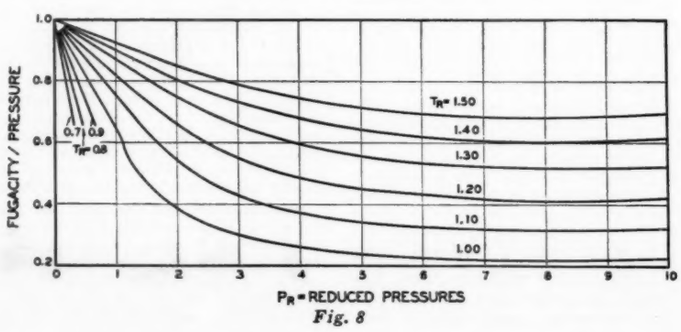


Fig. 8

Financial Condition Justifies Price Raise

(Continued from Page 11)

during a boom period was far too low and left nothing in the way of reserves for the depression period which followed.

By way of comparison it is worthy of note that the oil industry's close affiliate—the manufacture of automobiles and trucks—based on the reports of the 20 leading companies showed the following percentage profits on invested capital:

Year—	Per cent net profits
1928	23.5
1929	19.5
1930	8.8
1931	4.2
1932	5.1

Higher Prices Needed

Finally, because they explain the unsatisfactory earning statements of the oil industry and point to the remedy, the following representative prices compiled by The Oil and Gas Journal in its Annual and Semiannual Numbers are summarized in the following table:

Year—	1 Crude oil at wells	2 Tank car gasoline (cents)	3 Retail gasoline (cents)
1928	$1.31	.0795	17.63
1929	1.37	.0775	17.91
1930	1.23	.0634	16.33
1931	.63	.0345	13.09
1932	.88	.0392	13.30
1933 (6 mos.)	.42	.0227	11.90

1. Average posted prices per barrel at wells for 36° gravity Oklahoma-Kansas crude oil.

2. Average price per gallon for U. S. Motor gasoline (no octane rating) in Oklahoma based on low weekly quotations in The Oil and Gas Journal.

3. Average retail prices in 50 representative cities derived from monthly averages.

Eastern Motor Fuel Market Reported Firm

(Continued from Page 25)

covered their requirements for the balance of the year.

Prices

Price changes for the week were of minor importance. On the low and middle octane motor fuels the prices as quoted by the major refiners at their plants and terminals range from 6¼ cents at New York to 6½ cents at New England points. The above 65 octane material is quoted over a price range of 6½ to 7 cents. Kerosene (41-43 water white) is quoted at 5¼ to 5½ cents, with a fair demand. Prices on gas oils, residual fuels and distillates are unchanged.

Two or three of the major refiners in this territory have advanced their prices on steam refined stocks and bright stocks for export movement both in barrels and in bulk. Other refiners and exporters, however, continue to quote the prices in effect a week ago.

BRUNDRED BUYS OUT MIDLAND

TITUSVILLE, Pa., Oct. 14.—The Brundred Oil Corp. of Oil City has announced the purchase of the entire holdings of the Midland Oil Corp. of New York City. The properties are located in Cherrytree and Cornplanter Townships, consisting of about 550 acres of adjoining land with 102 pumping wells, seven power houses, two gasoline plants and six dwelling houses.

The Brundred Oil Corp. owns nearby property, formerly known as the Columbia or Storey farm. The Columbia was a noted property in early days, Andrew Carnegie having held a large interest in it. In his biography it is mentioned that the property had furnished him with a considerable amount of money at a time he was able to use it in the steel business.

New Catalytic Processes for Production of Motor Fuels

(Continued from Page 12)

was 1 gallon of Bunker C to be disposed of for 8.4 gallons of gasoline, while in the usual thermal operation there was 1 gallon of Bunker C for 2.4 gallons of gasoline. Similar results can be obtained with a distillate from a coking still operation running Mid-Continent topped crude.

The reduction in cost by the addition of a Houdry unit to an existing thermal plant would pay for the added investment in less than a year.

An interesting feature of the Houdry process is that its essential points—catalytic action, regeneration of the catalyst, and yield and quality of the products—can be demonstrated and tested in a laboratory apparatus costing a few hundred dollars to construct. Photographs of such an installation are reproduced here. The apparatus and catalyst have been furnished to a number of oil companies in order to enable them to test the process in their own laboratories on their own stocks.

The semiplant unit at Paulsboro is shown in Figure 3. The charging capacity, on a once-through basis, is 300-325 gallons per hour. A commercial plant with a charging capacity of 2,000 bbls. per day is now under construction. It will be in operation early next year.

The American rights of these processes are owned by the Houdry Process Corp., a Delaware corporation. The office and laboratory of the company are at Paulsboro, N. J.

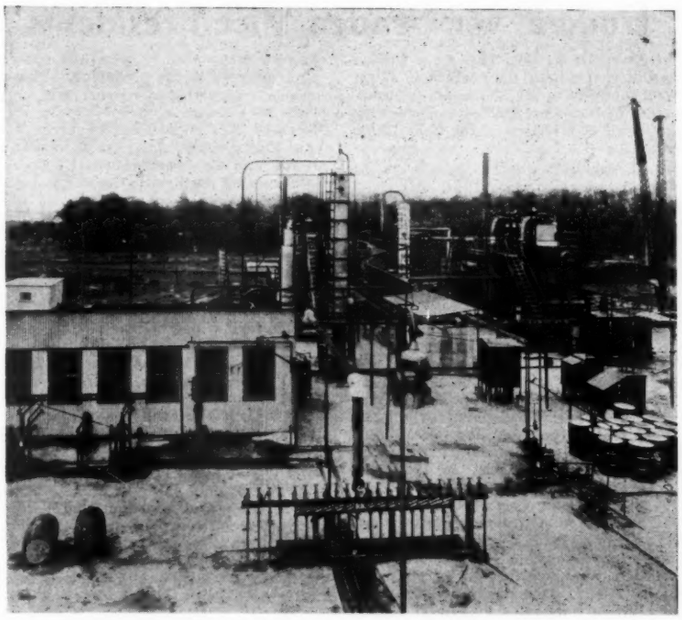


Fig. 3. Treating unit in center background; cracking plant in right background; pump house at left center; tanks are in the foreground, not shown.

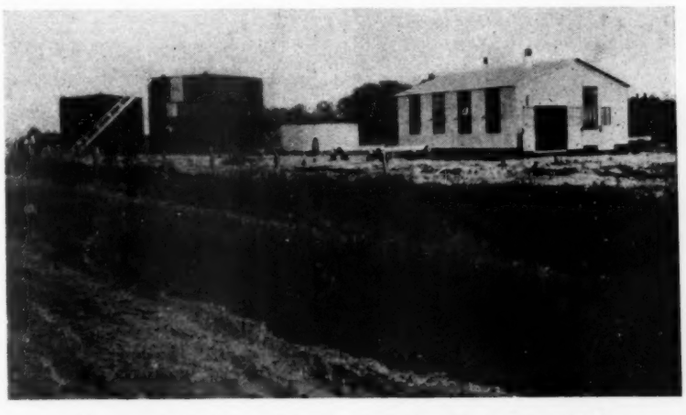
Traditional Oil Boom Absent in Greta Field

(Continued from Page 13)

with the proration being put on an acreage basis. The allowable withdrawal was fixed at 8 bbls. per acre, each well regardless of acreage being permitted a base of 120 bbls. with a maximum of 200 bbls. for wells on 25 acres. This is the only field in the State on a strictly acreage basis of proration as all acreage proration plans in the past have been held invalid by the courts. The acreage plan here was adopted at the unanimous request of all operators in the field who assured the Railroad Commission they would not contest such an order in the courts.

For the present period, this order permits an allowable of slightly over 6,200 bbls. daily. Previously to the order, operators voluntarily held production below 10,000 bbls. The potential daily production of present wells is estimated at more than 25,000 bbls. It has been learned by experience in the field that conditions are such at Greta that uniform control of all wells must be observed strictly.

The above restrictions are applicable to all wells in the main 4,400-foot horizon. A special hearing has been called for October 21 to determine the status of Nesral Oil Co.'s No. 2 Heard, which was recently completed in a 5,900-foot sand, opening a new horizon. The possibility that this sand may extend uniformly over the entire present field and perhaps further, and bring about a redrilling of the field, has brought into consideration a 40-acre spacing plan for development of that sand. Pending the playing out of the 4,400-foot sand, operators generally are not desirous of an extensive drilling of the new and deeper horizon.



New pump station of Atlantic Pipe Line Co. in Greta Field

Must Sign Code to Obtain Osage Lease

The next sale of Osage leases will be held in Pawhuska, Okla., on Monday, October 30. Eighty-one tracts will be offered comprising 12,522.20 acres. The following stipulation has been added to the usual requirements:

"It is understood that no person, firm, partnership, joint stock association or corporation will be permitted to hold any interest in Osage lands for oil mining purposes by lease, assignment, drilling contract or otherwise, without first signing an agreement to fulfill all obligations, conditions and stipulations of code promulgated for the petroleum industry, and any amendments thereof, approved by the President of the United States, under the act of June 16, 1933, as to operation of said lease or leases."

The completed list of the tracts to be offered follow:

Tract No.	Description	Acres
1	SW 10-21-12	160.00
2	NE 30-27-12	160.00
3	NW 30-27-12	160.00
4	SE 30-27-12	160.00
5	SW 30-27-12	160.00
6	SW 27-22-11	160.00
7	NE 28-22-11	160.00
8	NE 33-22-11	160.00
9	SW 33-22-11	160.00
10	NE 2-24-11	160.00
11	SE 20-27-11	160.00
12	NW 21-27-11	160.00
13	SW 29-28-11	160.00
14	SE 30-28-11	160.00
15	NE 31-28-11	160.00
16	NW 32-28-11	160.00
17	SW 27-20-10	160.00
18	NE 28-20-10	160.00
19	Fr. NE 29-20-10	61.65
20	Fr. W½ 29-20-10	68.08
21	SE 29-20-10	160.00
22	SE 22-28-10	160.00
23	SW 22-28-10	160.00
24	NE 27-28-10	160.00
25	NW 27-28-10	160.00
26	NE 4-20- 9	160.00
27	Fr. NW 4-20- 9	71.96
28	Fr. SE 4-20- 9	55.31
29	NE 6-21- 9	160.00
30	NW 6-21- 9	160.00
31	SE 6-21- 9	160.00
32	SW 6-21- 9	160.00
33	NE 9-21- 9	160.00
34	NW 10-21- 9	160.00
35	NE 11-21- 9	160.00
36	SE 11-21- 9	160.00
37	NE 20-21- 9	160.00
38	NW 20-21- 9	160.00
39	NW 35-21- 9	160.00
40	SW 35-21- 9	160.00
41	NW 26-23- 9	160.00
42	SW 29-23- 9	160.00
43	NE 32-23- 9	160.00
44	NW 32-23- 9	160.00
45	NW 22-24- 9	160.00
46	SW 1-26- 9	160.00
47	Fr. SW, SW and NW 23-21- 8	105.20
48	NW 10-23- 8	160.00
49	NE 4-24- 8	160.00
50	NW 4-24- 8	160.00
51	SW 8-24- 8	160.00
52	SE 18-24- 8	160.00
53	NE 21-24- 8	160.00
54	SW 28-24- 8	160.00
55	SE 25-25- 8	160.00
56	SE 33-25- 8	160.00
57	SW 33-25- 8	160.00
58	NE 36-25- 8	160.00
59	SW 9-23- 7	160.00
60	NW 16-23- 7	160.00
61	SE 34-23- 7	160.00
62	SW 34-23- 7	160.00
63	SE 1-24- 7	160.00
64	SW 10-24- 7	160.00
65	SW 12-24- 7	160.00
66	SW 13-24- 7	160.00
67	NE 19-24- 7	160.00
68	NW 28-24- 7	160.00
69	NE 33-25- 7	160.00
70	NW 33-25- 7	160.00
71	SE 33-25- 7	160.00
72	SW 33-25- 7	160.00
73	NE 2-25- 6	160.00
74	SW 8-25- 6	160.00
75	SE 10-25- 6	160.00
76	SE 16-25- 6	160.00
77	NW 21-25- 6	160.00
78	NE 22-25- 6	160.00
79	SE 14-26- 4	160.00
80	NE 23-26- 4	160.00
81	NW 24-26- 4	160.00
Total acres		12,522.20

Humble Reported to Have Acquired the King Ranch

HOUSTON, Tex., Oct. 16.—Humble Oil & Refining Co. has refused to deny or confirm the reports that it has acquired the famous King ranch of 1,225,000 acres, principally in Kleberg and Willacy Counties in the lower Gulf Coast district, south of Corpus Christi. Although it generally is assumed the deal has been completed, officials of the Humble company state there is nothing to put out at this time.

According to information from other sources, Humble Oil & Refining Co. is paying a total of $3,500,000 cash for leases to the ranch, the payment being in the form of a 20-year loan with the Humble company accepting a deed of trust. If the information is correct, this is the largest individual lease transaction for wildcat oil exploration on record.

In addition to Kleberg and Willacy, portions of the King ranch, known the country over for its size, extends into Jim Wells, Nueces, Kennedy, Brooks, Cameron, Jim Hogg and Hidalgo Counties. The original King ranch was established about 1850 by Capt. Richard King and Capt. Mifflin Kennedy, who later divided their holdings, the present King ranch being the portion retained by Captain King. On the latter's death in 1885 the widow, Mrs. Henrietta M. King, assumed control, placing the management in the hands of the late R. J. Kleberg, who married Miss Alice King, a daughter of Captain and Mrs. King. When Mr. Kleberg died a year ago, his son, R. J. Kleberg, Jr., became manager. Under direction of Mrs. King and Mr. Kleberg the ranch was developed into the largest ranch in the world owned by one family.

The ranch, however, although located in extremely promising territory, has always been a barrier to oil exploration and development. No oil companies or operators have been permitted inside the boundaries in pursuit of business and no geological or geophysical work has ever been done. Aerial pictures are the only definite guide at present for the exploitation of the ranch's possibilities. All past offers for leasing have been turned down.

Late Fields

EAST TEXAS

FORT WORTH, Tex., Oct. 17.—Tide Water and Texas Seaboard Oil Co.'s wildcat Woodbine discovery in southwestern Anderson County, is still making large percentage of water and basic sediment while flowing 3 to 15 bbls. of fluid per hour through chokes. The well is showing similar to the Boggy Creek discovery on the eastern edge of Anderson County. The two companies are laying approximately 3 miles of line to connect the well with the Gulf Pipe Line Co.'s trunk line running to north of well from West Texas to Gulf Coast, and also building a third 1,000-bbl. tank at well.

OKLAHOMA

Reports more encouraging to the owners of No. 1 Walker, in Section 28-17-4w, Crescent Pool, Logan County, Oklahoma, were being received early this calendar week. The well, owned by the Carter Oil Co. and Gypsy Oil Co., may equal the same company's No. 1 Miller, a half mile north of it which came in producing 5,700 bbls. in 24 hours. The well on the Walker farm is higher on structure and it is thought when it has been conditioned it will show a far greater production than 110 bbls. an hour, its best record up to Tuesday morning. In the same area the Sinclair Prairie Oil Co.'s No. 1 Shaffer, NE cor. SW, Section 28-17-4w, is so far off vertical that it will be plugged back to 5,000 feet and redrilled. Its present total depth is 6,473 feet. The Oklahoma Pipe Line Co. is laying a line into the field, and it is nearly completed. The Eason Oil Co., which has a refinery at Enid, has a line in and is taking oil.

The Carter Oil Co.'s No. 1 Riddle, CSL SE SE, Section 35-11-6, Keokuk Falls Pool, Seminole County, was acidized in Misener sand and made 780 bbls. in 24 hours and almost the same volume of oil the second day.

Van der Woude Shell Union President; Durkee, van Senden Vice Presidents

NEW YORK, Oct. 16.—As a further step in centralizing the operations of the Shell interests in the United States, additional officers were elected this week by the board of directors of the Shell-Union Oil Corp.

J. C. van Eck, who has been president of the corporation since 1924, was elected chairman of the executive committee, a new position created by the board of directors through a change in by-laws. R. G. A. van der Woude, who recently came to the New York office from St. Louis where he had been president and the executive head of the Shell Petroleum Corp., a Shell-Union subsidiary, succeeded Mr. van Eck as president of the latter corporation. Mr. van der Woude has been connected with the Shell interests for the past 25 years. For several years he was general manager of the Asiatic Petroleum Co. for North and Central China. Later he spent some time in Mexico and Venezuela. In 1922 and 1923 he served as vice president of the Roxana Petroleum Corp., which later became the Shell Petroleum Corp. After eight years spent at the London and The Hague offices of the Dutch-Shell he returned to St. Louis in 1931 as president of the Shell Petroleum Corp. Mrs. van der Woude formerly was Miss Mary Wendell, daughter of the late Professor Barrett Wendell of Harvard University.

W. P. Durkee, Jr., was elected a vice president of the Shell-Union and will have supervision of all Shell marketing in United States. G. H. van Senden was also elected vice president and will have charge of all manufacturing activities.

Mr. Durkee, Jr., left Dartmouth College in 1917 to enter the Navy at the start of United States' entry into the World War. At the close of the war he started to work in the oil industry, his first employment being in the refining end. Later he secured practical operating experience in the producing, accounting and marketing divisions, his work being in California and Wyoming. In 1929 wth W. C. Van Fleet he formed the Van Fleet-Durkee, Inc., which operated all the stations of the Shell Oil Co. of California on the Pacific Coast. On January 1, 1932, when his company was absorbed by the Shell Oil Co., he took over the management of the southern division. He came to the New York offices of the Shell-Union on August 1.

Mr. van Senden for several years, as vice president, was in charge of the manufacturing operations of the Shell Oil Co. of California, one of the largest refiners on the West Coast. Previously he had wide experience in refining operations, including research and development in Rumania and the Dutch East Indies. With the California Shell he was first superintendent of the Martinez refinery and later he was elected vice president.

It is understood here that the election of the new officers is part of the plan to direct all Shell operations in United States from the local headquarters. In the past, Shell-Union Corp. has been largely a holding unit and exercised only general supervision of the operations of the Shell subsidiaries. The principal subsidiaries are the Shell Oil Co. of California, an integrated organization operating on the West Coast with headquarters at San Francisco; Shell Petroleum Corp., another integrated company operating in the Southwest and Middle West, with headquarters in St. Louis, and the Shell Eastern Petroleum Corp., an eastern marketing organization with headquarters in New York.

The Shell-Union is now preparing to move its New York headquarters to large offices located in the R.C.A. Building.

MICHIGAN

MOUNT PLEASANT, Mich., Oct. 17. George Hanner's No. 1 Methodist Church Section 17, Porter Township, has been completed with about 75 bbls. an hour, showing some water. Stough's No. 4, Section 23, Vernon Township, drilled in, is estimated at 700 bbls. Templemayr & Tope's No. 1, Edward Reakes lease, Section 15, Vernon Township, about 1 foot in pay, flowed 500 bbls. and is shut in, probably will be completed tomorrow. This extends the Vernon Field about a mile northeast.

Ickes to Cut Shipments of States Overproducing

WASHINGTON, D. C., Oct. 17.—Secretary of the Interior Ickes, oil administrator, declared today that to prevent a disruption of his oil production program by a small minority in the oil industry he would on November 1, under authority of the petroleum code, curtail shipments in interstate commerce with respect to such states as have not cut actual production since September 8 down to the permissible quotas.

A proper balance of supply and demand is essential to stabilization of the petroleum industry under the code, he said.

DEATH OF I. R. TRAVIS

Isaac R. Travis, age 86, veteran oil producer, died in Tulsa, Friday, October 13.

Mr. Travis was born in Kovno, Russia, and was a grain merchant there. He had from boyhood a desire to come to the United States and in 1889 sold out his business and came to this country with his family. They settled in Marietta, Ohio, and Mr. Travis engaged in the oil business.

He moved to Tulsa about 20 years ago. All of his five sons were in the oil business in the Mid-Continent Field. They are: D. R., Barney and Max Travis of Tulsa; S. R. Travis of Dallas, Tex., and M. M. Travis, Longview, Tex. Mrs. H. Appleman and Mrs. H. I. Kornfeld of Tulsa and Mrs. B. Revel of New York are daughters of deceased.

Burial will be made in Palestine where the parents and first wife of the dead man were interred. Mr. Travis' second wife survives.

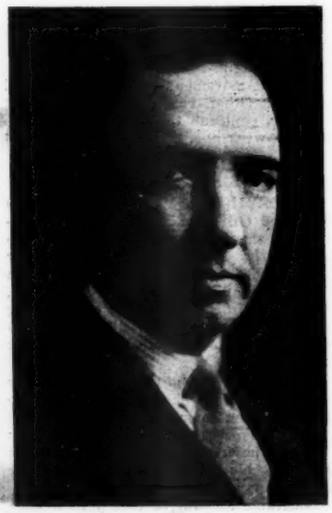
WILLIAM H. BARBER DEAD

MINNEAPOLIS, Minn., Oct. 16.—Funeral services were held today for William H. Barber, 78, a figure in the oil industry for over 50 years, who died last Thursday in his home here. Mr Barber was chairman of the board of the W. H. Barber Co., which he founded in 1903 and which grew, under his leadership, to become one of the largest independent distributors of petroleum products, with plants in Minnesota and Chicago. Both plants were closed today.

—Photo by Blank & Stoller, Inc.
R. G. A. van der WOUDE

—Photo by Blank & Stoller, Inc.
J. C. VAN ECK

WILLIAM P. DURKEE, JR.



G. H. van SENDEN

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

October 17, 1933

Taxes

The gasoline quotations given in the following tables include the 1½-cent Federal tax effective June 17, 1933, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third or competitive grade is available at 1 or more cents per gallon under the service station price for the regular grade. Ethyl Gasolines are sold 2 cents above the service station price for the regular grade.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atlanta, Ga.	22.0	22.0	7.5	14.0
Augusta	22.0	22.0	7.5	14.0
Macon	22.0	22 0	7.5	14.0
Savannah	22.0	22.0	7.5	14.0
Birm'ham, Ala.	24.0	24.0	8.5	13.5
Mobile	23.0	23.0	8.5	12.5
Montgomery	25.0	25.0	8.5	14.5
Jackson, Miss.	22.0	22 0	7.5	13.0
Vicksburg	20.5	20.5	7.5	13.0
Jack'ville, Fla.	22.0	22.0	8.5	12.5
Miami	22.0	22.0	8.5	13.5
Pensacola	20.0	20.0	8.5	13.5
Tampa	22.0	22.0	8.5	12.5
Lexington, Ky.	19.0	19.0	6.5	11.0
Covington	21.0	21.0	6.5	11.0
Louisville	19.0	19.0	6.5	11.0
Paducah	19.5	19.5	6.5	11.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2½ cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1-cent state tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1-cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Dallas, Tex.	16.5	19.5	5.5	8.5
Fort Worth	16.5	19.5	5.5	8.5
Houston	16.5	19.5	5.5	8.5
San Antonio	16.5	19.5	5.5	8.5
El Paso	17.0	20.0	5.5	8.5
Texarkana	*19.5	19 5	5.5	8.5
Muskogee	17.0	19 5	5.5	8 5
Okla. City	17.0	19.5	5.5	8.5
Tulsa	17.0	19.5	5.5	8.5
Ft. Smith Ark.	*17.9	17.9	5.5	9.0
Little Rock	*20.4	20.4	7 5	9.0

*Less 3 cents to dealers.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Chicago	17.8	17.8	4.5	9.7
Decatur, Ill.	18.2	18.2	4.5	10.2
E. St. Louis	17.5	16.7	4.5	9.5
Joliet	18.2	18.2	4.5	10.2
Peoria	18.2	18.2	4.5	10.2
Quincy	15.8	15.8	4.5	10.0
Davenport, Ia.	18.1	18.1	4.5	10.1
Des Moines	18.1	18.1	4.5	9.0
Mason City	18.1	18.1	4.5	10.1
Sioux City	17.7	17.7	4.5	9.7
Duluth, Minn.	18.7	18.7	4.5	10.4
Mankato	18.3	18.3	4.5	10.3
Minneapolis	18.4	18.4	4.5	10.4
LaCrosse, Wis.	19.8	19.8	5.3	10 9
Green Bay	19.2	19.2	5.5	10.2
Milwaukee	18.7	18.7	5.5	9.7
Madison	18.9	18.9	5.5	9.9
Detroit, Mich.	18.0	18 0	4.5	10.5
Grand Rapids	18.2	18.2	4.5	10.2
Saginaw	18.5	18.5	4.5	10.5
Evansville, Ind.	19.0	17.5	5.5	10.0
Indianapolis	19.2	19.2	5.5	10 2
South Bend	19.5	19.5	5.5	10.5
Fargo, N. Dak.	20.1	20.1	4.5	12.1
Huron, S. Dak.	20.4	20.4	5.5	11.4
Sioux Falls	19 9	19.9	5.5	10.9
K. C., Mo.*	17.2	17.2	4.5	7.5
Springfield*	17.1	17.1	4.5	9.1
St. Louis	16.2	16.2	4.0	8.7
St. Joseph*	16.8	16 8	4.5	8.8
Wichita, Kans.	16.1	16.1	4.5	8.1
Bartlesville, Ok.	16.5	17.0	5.5	9.5

*State tax 2 cents, 1-cent city tax and 1½-cent Federal tax.

Effective June 1, 1933—Discounts off tank wagon price to consumers on 500 gallons or more per month in territory outside of Chicago metropolitan area: 2 cents on Ethyl and Red Crown gasolines, and 1 cent on Stanolind gasoline. One-half cent additional discount in Chicago division.

Effective July 1, 1933—Discounts on resellers authorized agent's agreement made off the service station price throughout the territory as follows: 2.5 cents on Red Crown Ethyl and Standard Red Crown gasolines, and 1.5 cents on Stanolind gasoline. Half of reduction from normal service station price shall be absorbed by resellers up to maximum of 1 cent on all grades.

Stanolex Furnace Oil in Chicago

Effective September 13, 1933, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), under 100 gallons, 8¼ cents; No. 2 (30-34 stw zero), 7¾ cents; No. 3 (22-26 zero), 7¼ cents; No. 4 under 300 gallons (12-16 zero), 6¼ cents; viscosity of No. 4, 90-115 at 100° F.; No. 5 under 300 gallons, 6 cents; for deliveries of 100 gallons or more deduct 1 cent.

Naphtha

	Tank	
	Wagon	Car
Oleum spirits	11.9	7.69
V.M.&P. naphtha	15.9	8.44
Cleaners' naphtha	15.0	8.94
Stanisol	15.0	8.19

Prices f.o.b. Chicago, September 13, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atl'tic City, N.J.	19.2	18.7	4.5	10.0
Newark	18.5	18.0	4.5	9.5
Annapolis, Md.	19.8	19.3	5.5	10.0
Baltimore	19.3	18.8	5.5	9.0
Cumberland	20.8	20.3	5.5	12.7
Wash'g'n, D. C.	17.5	17.0	3.5	11.0
Danville, Va.	21.9	21.4	6.5	12.9
Norfolk	20.4	19.9	6.5	11.3
Petersburg	21 2	20 7	6.5	12 4
Richmond	20.8	20.3	6.5	11.7
Roanoke	22.0	21.5	6 5	12.9
Charls'n, W.Va.	20.2	19.7	5.5	12.6
Parkersburg	19.5	19.0	5.5	11.2
Wheeling	20.2	19.0	5.5	12.2
Charlotte, N. C.	23.6	23.1	7.5	13.5
Hickory	23.9	23.4	7.5	13.7
Mt. Airy	23.9	23.4	7.5	13.8
Raleigh	23.4	23.9	7.5	13.2
Salisbury	23.7	23.2	7.5	13.6
Charleston, S.C.	21.4	20.9	7.5	11.2
Columbia	23.2	22.7	7.5	13.2
Spartanburg	23.6	23.1	7.5	13.5

Note—Dealer contracts for gasoline are written at 2½ cents over the posted tank car price. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey and Baltimore, Md.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
N. Orleans, La.	20 8	20 3	*7 5	†12.0
Baton Rouge	20 0	19 5	6.5	†12 0
Alexandria	20.9	20.4	*7.5	†12 0
Lafayette	21.1	20.6	*7 5	†12.0
Lake Charles	21 0	20 5	*7 5	†12 0
Shreveport	18 8	18.3	6 5	†12 0
Knoxville, Tenn.	24.2	22.7	8.5	12.5
Memphis	22.6	22.1	8.5	10.0
Chattanooga	23.9	23.4	8.5	10.0
Nashville	23.5	23.0	8.5	10 0
Bristol	24.1	24.6	8.5	13.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax.

Effective June 2, 1933, station prices fixed at 7 cents above basic tank car price at key refining points in territory. Commercial consumers for tank wagon delivery pay following amounts over tank car price basis yearly deliveries:

1,000 to 75,000 gallons	2.5
75,000 to 300,000 gallons	1.5
Over 300,000 gallons	1.0

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank truck†	Posted retail	Incl'ds tax	tank wagon
San Francisco	17.5	20.5	4.5	12.5
Los Angeles	14.5	17.5	4.5	12.5
Fresno, Calif.	18.5	21.5	4.5	14.0
Phoenix, Ariz.	18 5	21.5	6.5	†16.0
Reno, Nev.	21.0	24.0	5.5	15.5
Portland, Ore.	20.0	23.0	5.5	12.5
Seattle, Wash.	20 0	23.0	6.5	13.5
Spokane	23.0	26.0	6.5	18.0
Tacoma	20.0	23.0	6.5	13.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent. ‡Includes 5-cent state tax.

New York and Part of New England District

STANDARD OIL CO. OF NEW YORK

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Albany, N. Y.	17.1	18.1	4.5	9.5
New York	17.0	18.0	4.5	8 5
Buffalo	17.7	18.7	4.5	9.5
Rochester	17.8	18.8	4.5	9.5
Syracuse	17.6	18.6	4.5	9.0
Boston, Mass.	17.0	18.0	4.5	8.5
Augusta, Me.	18.5	19.5	5.5	9.0
Manch'tr, N. H.	19.2	20.2	8.5	8.5
Burlington, Vt.	19.8	20.8	5.5	9.0

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Philadelphia, Pa.	16.5	17.0	4.5	10.0
Pittsburgh	17.0	18.0	4.5	10.0
Allentown	17.0	18.0	4.5	10.0
Erie	17.0	18.0	4.5	10.0
Scranton	17.0	18.0	4.5	10.0
Altoona	17.0	18.0	4.5	10.0
Dover, Del.	17.0	18.0	4.5	10.0
Wilmington	17.0	18.0	4.5	10.0
Boston, Mass.	17 0	18 0	4.5	8.5
Springfield	17.6	18 6	4 5	8 5
Worcester	17.5	18.5	4.5	8.5
Hartford, Conn.	16 4	17.4	3.5	8.5
New Haven	16 2	17.2	3.5	8.5
Providence, R.I.	16.0	17.0	3.5	8.5

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Denver, Colo.	19.0	21.5	5.5	12.5
Pueblo	19 0	21 5	5 5	13 0
Grand Juctn.	21.0	23.5	5.5	15.0
Casper, Wyo.	19.5	22.0	5.5	11.0
Cheyenne	18.0	20.5	5.5	13.0
Butte, Mont.	21 0	23 5	5 6	17 5
Billings	23.0	25.5	6.5	16.5
Helena	23.0	25 5	6.5	17.5
Great Falls	22.5	25.0	6.5	17.5
Salt Lake, Utah	22 0	24.5	5 5	16 0
Boise, Idaho	23.0	25.5	6.5	18.0
Twin Falls	23.0	25.5	6.5	18.0
Albu'que, N. M.	19.5	22.5	*7.5	13.0

*One-cent city tax.

Effective June 1, 1933, dealers and lease and license accounts will receive 2½ cents discount on regular gasoline in Montana, Colorado, Wyoming, Utah and Idaho.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Ohio points	17.0	18.0	5.5	*12.5

*Includes state tax of 1 cent, effective July 22.

Canada*

IMPERIAL OIL, LTD.
Imperial 3-Star Gasoline

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Hamilton, Ont.†	26.5	27 5	6 0	17 5
Toronto, Ont.†	26 5	27.5	6.0	17.5
Brandon, Man.*	31 0	34 5	7.0	22.5
Winnipeg, Man.	28.0	31.5	7 0	19.5
Regina, Sask.	31 0	35 0	6.0	23.5
Saskatoon, Sask.	33.0	37.0	6 0	25 5
Edmonton, Alta.	31 5	35.5	6 0	24 5
Calgary, Alta.	28.0	32 0	6.0	21.0
Vanc'ver, B. C.†	30.0	31.0	7.0	24.0
Montreal, Que.	24 0	27 0	6.0	17.5
St. Johns, N. B.	26 5	30.5	7.0	21.0
Halifax, N. S.	25.5	29.5	6.0	21.0

*Imperial gallon used in Canada. †Dealer discount posted tank wagon on gasoline in Ontario and British Columbia subject to dealer's discount of 3 cents per gallon.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wagon	Service station	Incl'ds tax	tank wagon
Omaha	18.8	19.8	5.5	10.8
McCook	17 5	17 5	5 5	10 0
Norfolk	19.3	20 3	6 5	11 3
N. Platte	20.3	21 3	5.5	10.5
Scottsbluff	19.8	19.8	5.5	11.0

Note: Discount to dealers and AAA commissions. From service station price: Red Crown Ethyl and Standard Red Crown gasoline, 3 cents. Reliance (third grade) gasoline, 2 cents. Rentals under lease and agents agreement, one-half cent per gallon additional.

Discount to consumers under contracts (large consumers under contracts and governmental units): On tank wagon deliveries of gasoline on monthly purchases of 500 gallons, or yearly purchases of 6,000 gallons, from the service station price: Red Crown Ethyl and Standard Red Crown Gasoline, 2 cents per gallon; Reliance (third brand) gasoline, 1 cent per gallon.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

The Magnolia Petroleum Co. September 27 reduced the tank wagon and service station prices of gasoline one-half cent in San Antonio, Tex. September 21 it reduced the tank wagon price of kerosene 1½ cents in Texarkana.

The Standard Oil Co. of California October 14 reduced the tank wagon and service station prices of gasoline 2½ cents in Los Angeles.

The Standard Oil Co. (Indiana) October 14 reduced the service station price of gasoline in East St. Louis .08 cent.

OIL BURNER RULES ADOPTED

VICTORIA, B. C., Oct. 16.—Fire prevention activities in British Columbia this year included the adoption of regulations governing the sale, installation and maintenance of oil burners. The fire marshal's department found that unapproved types of burners were being utilized, involving serious fire risks.

ROCKY MOUNTAIN RUNS

Estimated daily average production for the week ending October 14 follows:

WYOMING	
Salt Creek	18,670
Big Muddy	1,750
Badger Basin	40
Byron-Garland	1,040
Byron-East	100
Dallas Derby	310
Dutton Creek	70
Elk Basin	570
Ferris	40
Frannie	210
Grass Creek	Shut in
Greybull	10
Hamilton Dome	860
Hudson	220
LaBarge	750
Lance Creek	200
Lost Soldier	1,570
Mule Creek	Shut in
Midway	70
Notches	Shut in
Oregon Basin	1,000
Osage	620
Pilot Butte	30
Rex Lake	30
Rock River	1,190
South Casper	750
Poison Spider	240
Teapot	30
Warm Springs	Shut in
Total	30,370
MONTANA	
Buckley-Border	320
Cat Creek	710
Cut Bank	900
Dry Creek	290
Kev'n-Sunburst	3,400
Lake Basin	50
Pondera	640
Total	6,310
COLORADO	
Florence	330
Fort Collins and Wellington	530
Iles Dome	540
Moffat	590
Orchard	130
Rangely	90
Tow Creek	230
Total	2,440
NEW MEXICO	
Artesia	590
Cooper area	70
Empire area	0
Eunice area	1,020
Getty Pool	0
Hobbs	33,530
Hogback	200
Hospah	Shut in
Jal	1,670
Lea area	2,220
Jackson	940
Maljamar	200
Rattlesnake	840
Table Mesa	80
Total	41,360
Total all fields	80,480
Total previous week	81,830
Difference	1,350

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1½ cents a gallon on gasoline and 4 cents on lubricating oils, which became effective June 17, 1933.

Refinery Gasolines

	Oct. 17		Oct. 10	
OKLAHOMA (Group 3)—				
*U. S. Motor grades:				
Third grade	.04	.04¼	.04	.04¼
Regular	.04¾	.05	.05	.05¼
Premium	.05¼	.05½	.05½	.05¾
60-62 4.0 grades:				
Third grade	.04⅛	.04⅜	.04¼	.04½
Regular	.05	.05¼	.05¼	.05½
Premium	.05⅜	.05⅝	.05½	.05⅝
64-66 390	.04⅜	.05	.04¾	.05
64-66 375	.04¼	.05⅛	.04⅞	.05⅛
68-70 350	.05	.05¼	.05⅛	.05¼
NORTH TEXAS—				
U. S. Motor grades:				
Third grade	.03⅞	.04⅛	.03⅞	.04⅛
Regular	.04¼	.04¾	.04¾	.5
Premium	.05		.05¼	.05½
60-62 400	.04¼	.04½	.04½	.04¾
64-66 390	.04⅜	.04⅝	.04⅞	.05
64-66 375	.04¾	.05	.05⅛	.05¼
64-66 360	.05	.05⅛	.05¼	
†NORTH LOUISIANA—				
U. S. Motor grades:				
Third grade	.04¼		.04¼	.04½
Regular	.05¼		.05¼	
Premium	.05¾		.05¾	.06
60-62 400	.04½		.04½	.04¾
†ARKANSAS—				
U. S. Motor grades:				
Third grade	.04¼	.04½	.04⅜	.04⅝
Regular	.05¼	.05⅝	.05¼	.05⅜
Premium	.05⅜		.05¾	.06
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Third grade	.04⅛	.04¼	.04	.04¼
Regular	.04⅞	.05	.04⅜	.05
Premium	.05¼	.05½	.05¼	.05½
60-62 400	.04⅛	.04⅜	.04⅛	.04¼
64-66 375	.04⅞	.05	.04½	.04¾
68-70 360	.05⅛		.04¾	.05
Aviation fighting grade	.05½	.05¾	.05⅜	.05¾

*Octane Ratings—The following octane ratings apply to the three grades of U. S. Motor gasoline: Regular 60-64 octane number, premium 65 and above octane number; third grade, 59 and below octane number. Octane ratings determined by C.F.R. Motor Method.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.05½	.05¾	.05⅝	.05⅞
60-62 400	.05⅝	.05⅞	.05¾	.06
64-66 375	.06	.06¼	.06⅛	.06⅜
68-70 350	.06½	.06¾	.06⅜	.06⅝
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08½	.08	.09
58-60 400	.08	.09	.08¾	.09¾
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.06¼	.06½	.06¼	.06½
Philadelphia	.06¼	.06½	.06¼	.06½
Boston	.06½	.0670	.06½	.0670
Baltimore	.06	.06¼	.06	.06¼
Charleston, S. C.	.06¼		.06¼	
U. S. Motor, 65 and above:				
New York (Bayonne)	.06½	.06¾	.06½	.06¾
Philadelphia	.06½	.06¾	.06½	.06¾
Boston	.06¾	.0695	.06¾	.0695
Baltimore, Md.	.06¼	.06½	.06¼	.06½
Charleston, S. C.	.06½		.06½	
GULF COAST (domestic)—				
U. S. Motor, 65 octane and above	.06	.06¼	.05¾	.06
U. S. Motor, below 65 octane number	.05¾		.05½	

Naphthas

OKLAHOMA (Group 3)—	Oct. 17		Oct. 10	
50-52 450 (blending)	.04¼	.04½	.04½	.04¾
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.05½	.05¾	.05½	.05¾
†ARKANSAS—				
48-50 (blending)	.04½	.04¾	.04½	.04¾
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.04⅛	.04½	.04⅛	.04½
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06½	.06¾	.06⅜	.06⅞
Lacquer diluent, 180 i.b.p.-250 e.p.	.07¾	.07⅞	.07¾	.07⅞
Lacquer diluent, 140 i.b.p.-200 e.p.	.08¾	.08⅞	.08¾	.08⅞
Rubber solvent, 68-70 gr., 1'0 i.b.p.-390 e.p.	.06¼	.06⅜	.06¼	.06⅜
Stoddard solvent, 300 i.b.p.-410 e.p., over 83° flash	.06⅛	.06¼	.06¼	
Petroleum thinner, 290-300 i.b.p., 415 e.p., over 83° flash	.05¾		.05¾	
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06		.06	
Petroleum spirits	.05¼	.05¾	.05⅛	.05⅜

Natural Gasolines

OKLAHOMA (Group 3)—	Oct. 17		Oct. 10	
Grade 18-55	.06⅜		.06	.06¼
Grade 26-70	.05¼		.05	.05¼
Grade 30-70	.04⅞		.04¾	
Low vapor pressure grades:				
15 lb. v.p. (max.)	.06⅜	.06½	.06¼	
11 lb. v.p. (max.)	.06½		.06¼	.06½
NORTH TEXAS—				
Grade 18-55	.06¼		.05⅞	.06
Grade 26-70	.05⅛		.05	.05⅛
Grade 30-70	.04⅝		.04⅝	
Low vapor pressure grades:				
15 lb. v.p. (max.)	.06¼		.06	
11 lb. v.p. (max.)	.06¼	.06⅜	.06	.06¼
NORTH LOUISIANA—				
Grade 26-70	.05½		.05¼	.05⅜
CALIFORNIA—				
75-85 375	.05¾	.06¾	.06	.07

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Oct. 17		Oct. 10	
41-43	.03½		.03½	.03¾
42-44	.03⅝	.03⅞	.03⅝	.03⅞
NORTH TEXAS—				
40-41	.03⅛	.03¼	.03⅛	.03¼
41-43	.03¼		.03¼	
†NORTH LOUISIANA—				
41-43	.03¾		.03¾	.04
42-44	.04		.04	.04⅛
†ARKANSAS—				
41-43	.03⅞		.03⅞	.04
PENNSYLVANIA (inland refineries)—				
45	.04¾	.05	.05¼	.05½
46	.04⅞	.05⅛	.05½	.05¾
47	.05⅛	.05⅜	.05⅝	.05⅝
CHICAGO (based on Oklahoma Group 3)—				
41-43	.03⅜	.03½	.03⅜	.03½
42-44	.03⅝	.03⅞	.03⅜	.03⅞
*CALIFORNIA—				
38-40 high burning test	.04¼	.04¾	.04¼	.04¾
NEW YORK (Bayonne, N. J.)—				
41-43	.05½		.05½	
GULF COAST (domestic)—				
41-43 water white	.04½	.04¾	.04¼	.04⅝

*For Pacific Coast consumption.
†For Arkansas, Louisiana and Mississippi delivery.

Furnace Oils and Tractor Fuels

OKLAHOMA (Group 3)—	Oct. 17		Oct. 10	
32-36 straw	.02⅞	.03⅛	.02⅞	.03⅛
36-38 straw	.02⅝		.02⅝	
38-40 straw	.02⅞	.03¼	.02⅞	.03¼
39-41 prime	.03		.03	
NORTH TEXAS—				
38-40 straw	.02⅝	.02¾	.02⅝	.02¾
†NORTH LOUISIANA—				
36-40	.03		.03	
†ARKANSAS—				
32-36	.03		.03	
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.02⅞	.03	.02⅞	
38-40 straw	.02⅞	.03	.02⅞	.03
38-40 prime white	.03	.03⅛	.03	.03⅛
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.04	.04⅛	.04	.04⅛
NEW YORK (Bayonne, N. J.)—				
36-40	.05½		.05½	
32-36 No. 2 grade	.04½		.04½	
21 (industrial)	.04		.04	

Above prices are for distillate oils of zero cold test under 190° flash and good odor.
†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil quoted per gallon basis; Diesel oil and fuel oil per barrel.

OKLAHOMA (Group 3)—	Oct. 17		Oct. 10	
32-36 gas oil cracking stock	.01⅞	.02⅛	.01⅞	.02⅛
U.G.I. gas oil	.02		.02	
32-36, zero to 15 gas oil, high flash	.02¼	.02⅜	.02¼	.02¾
28-30, zero to 10 fuel oil	.85	.92½	.80	.85
26-30, zero to 10 fuel oil	.82½	.90	.80	
24-26 fuel oil	.62½	.65	.60	.65
20-22 fuel oil	.55	.60	.55	.60
Below 16 fuel oil	.50	.55	.50	.55
NORTH TEXAS—				
32-36 gas oil, industrial	.02		.02	
22-26 fuel oil	.57½	.62½	.57½	.62½
Below 20 fuel oil	.47½	.50	.47½	.50
†NORTH LOUISIANA—				
32-36 gas oil, zero	.03		.03	
14-16 fuel oil	.50	.60	.50	.60
†ARKANSAS—				
30-32 gas oil, zero	.02¾	.03	.02¾	.03
14-16 fuel oil	.50	.55	.50	.55
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.01¾	.02	.01⅞	
28-30 (zero) fuel oil	.85	.92½	.85	.92½
26-28 (zero) fuel oil	.75	.77½	.75	.77½
22-26 (zero) fuel oil	.65	.67½	.65	.67½
18-22 (zero) fuel oil	.57½	.60	.57½	.60
Below 18 fuel oil	.42½	.47½	.42½	.47½

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel less in all areas than shown in above tables.
†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
36-40	.03⅞	.04	.03¾	.03⅞
CALIFORNIA—				
30-34 gas oil per bbl.	.90	1.05	.90	1.05
27 plus Diesel	.90	1.00	.90	1.00
15-19 bunker (at tidewater)	.55	.65	.55	.65
15-19 (cargo lots)	.50	.60	.50	.60
15-19 (tank cars)	.45	.65	.45	.65
GULF COAST—				
28-30 gas oil	.03½		.03⅜	.03½
28-30 Diesel	1.80		1.80	
Bunker C (bulk cargoes)	.92½	.95	.92½	.95
Bunker C (bunkers)	.95		.95	
NEW YORK (Bayonne, N. J.)—				
28 plus, gas oil	.04½		.04½	
28-30 Diesel (lighterage 6½ cents per bbl.)	1.95		1.95	
28-30 Diesel (tank cars)	.04½		.04½	
Bunker C (to ocean-going ships in N. Y. harbor)	1.10		1.10	

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

	Oct. 17	Oct. 10
Pile run (screenings)	5.25	5.25
Direct from still	6.25	6.25
Lump and egg	7.00	7.00

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

OKLAHOMA (Group 3)—	Oct. 17		Oct. 10	
Zero to 10 Cold Test:				
150-3	.07¼	.07½	.07¼	.07½
180-3	.08⅛	.08¾	.08⅛	.08¾
180-4	.08¼	.08½	.08¼	.08½
200-3	.09	.09¼	.09	.09¼
200-4	.08¾	.09	.08¾	.09
240-3	.11	.11¼	.11	.11¼
240-4	.10¾	.11	.10¾	.11
280-3	.12	.12¼	.12	.12¼
280-4	.11½	.11¾	.11½	.11¾
300-3½	.12¾	.13	.12¾	.13
350-3½	.13¾	.14	.13¾	.14
400-4	.14¾	.15	.14¾	.15
500-4½	.15¾	.16	.15¾	.16
100-2 paraffin oil	.05¼	.05½	.05¼	.05½
15-30 Cold Test:				
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.10¼	.10½	.10¼	.10½
240-4	.10	.10¼	.10	.10¼
280-3	.11¼	.11½	.11¼	.11½
280-4	.11	.11¼	.11	.11¼
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.17	.17½	.17	.17½
10 pour test	.16½	.16¾	.16½	.16¾
15 pour test	.15	.15¼	.15	.15¼
25 pour test	.14¼	.14½	.14¼	.14½
180 vis., No. 3, 25 pour test	.16¾	.17	.16¾	.17
200 vis., No. 3:				
Zero pour test	.21½	.21¾	.21½	.21¾
10 pour test	.20½	.20¾	.20½	.20¾
15 pour test	.19½	.19¾	.19½	.19¾
25 pour test	.19¼	.19½	.19¼	.19½
GULF COAST—				
Pale Oils:				
200-3	.06½		.06½	
300-3	.07	.07½	.07	.07½
5'0-3½	.07¾	.08¼	.07¾	.08¼
750-3½	.08½	.09	.08½	.09
1,200-3½	.09⅛	.09½	.09⅛	.09½
2,000-4	.10	.10½	.10	.10½
Red Oils:				
2'0-5-6	.05½		.05½	
300-5-6	.06	.06½	.06	.06½
500-5-6	.06¾	.07¼	.06¾	.07¼
750	.07½	.08	.07½	.08
1,200-5-6	.08¼	.08¾	.08¼	.08¾

2,000-6 plus	.09½	.09¾	.09½	.09¾
CALIFORNIA—				
Pale Oils:				
100-2½-3	.09	.09½	.09	.09½
200-2½-3	.09½	.10	.09½	.10
300-3-3½	.10½	.11	.10½	.11
350-3-4	.11	.11½	.11	.11½
400-3-4	.11½	.11¾	.11½	.11¾
450-3-4	.11¾	.12	.11¾	.12
500-3-4	.12	.12½	.12	.12½
Red Oils:				
200-4-5	.09½	.10	.09½	.10
300-5-6	.10½	.11	.10½	.11
350-5-6	.11	.11½	.11	.11½
400-5-6	.11½	.11¾	.11½	.11¾
450-5-6	.11¾	.12	.11¾	.12
500-5-6	.12	.12¼	.12	.12¼
600-5-6½	.12¼	.12½	.12¼	.12½
700-6½ plus	.12½	.12¾	.12½	.12¾
750-6½ plus	.12¾	.13	.12¾	.13
900-6½ plus	.13	.14	.13	.14

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Oct. 17		Oct. 10	
630 light green	.06¾	.07⅞	.06¾	.07¾
600 light green S.R.	.06¼	.07¼	.06¼	.07¼
600 dark green S.R.	.04¾	.05¾	.04¾	.05¾
Bright Stocks:				
190-200 D	.24	.25	.24	.25
150-160 D, 0-10	.22¼	.22½	.22¼	.22½
150-160 D, 10-25	.21⅜		.21⅜	
150-160 D, 25-40	.21¼		.21¼	
150-160 E	.20½		.20½	
PENNSYLVANIA—				
600 S.R.	.16	.16¼	.16	.16¼
650 S.R.	.18	.18¼	.18	.18¼
600 Pennsylvania flash	.19	.19¼	.19	.19¼
650 D filtered	.23¾	.24	.23¾	.24
600 E filtered	.19¼	.19½	.19¼	.19½
Pennsylvania Grade bright stock:				
No. 8 color, 145-50 at 210; 540-550 flash:				
10 pour test	.27½	.27¾	.27½	.27¾
15 pour test	.26	.26½	.26	.26½
25 pour test	.25	.25½	.25	.25½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Oct. 17		Oct. 10	
124-126 white crude scale	.03½	.03¾	.03½	.03¾
PENNSYLVANIA—				
122-124	.03⅞	.04	.03¾	.03⅞
124-126	.04⅛		.03⅞	
NEW YORK HARBOR—				
120-122 (a.m.p. basis)	.04	.0410	.04	.0410
125-127	.04¼	.0480	.04¼	.0480
130-132	.0465		.0465	
133-135	.0530		.0530	
135-137	.0555		.0555	
Petrolatum in barrels in carload lots:				
Dark green	.01⅝		.01⅝	
Amber	.02¼	.02½	.02¼	.02½
Extra amber	.02⅝		.02⅝	
Lily white	.06	.06¼	.06	.06¼
Snow white	.07	.07¼	.07	.07¼
Cream	.04¼	.05	.04¼	.05
CHICAGO (f.o.b. switching district)*—				
122-124	.0440	.0450	.0440	.0450
125-127	.0465	.0475	.0465	.0475
127-129	.0480	.0490	.0480	.0490
130-132	.0540	.0550	.0540	.0550
132-134	.0565	.0575	.0565	.0575

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx.
Add 3° F. a.m.p.

Export Prices

GASOLINE

GULF COAST—	Oct. 17		Oct. 10	
U. S. Motor	.05½	.05⅝	.05½	.05⅝
60-62 400	.05⅝	.05¾	.05⅝	.05¾
61-63 390	.05¾	.05⅞	.05¾	.05⅞
64-66 375	.06		.06	
LOS ANGELES, CALIF.—				
U. S. Motor grades:				
53-55 octane	.04½	.05	.04½	.05
55-65 octane	.05	.05¼	.05	.05¼
65-67 octane	.05½	.06	.05½	.06
67-69 octane	.06¼	.06¾	.06¼	.06¾
Above 69 octane	.07	.08	.07	.08
58-60 400 endpoint	.05¼	.06¼	.05¼	.06¼

KEROSENE

GULF COAST—				
41-43 prime white	.04⅛	.04¼	.04⅛	.04¼
41 water white	.04¼	.04⅜	.04¼	.04⅜
LOS ANGELES, CALIF.—				
41-43 water white	.03¾	.04¼	.03¾	.04¼

LUBRICANTS

NEW YORK, (f.a.s. in bbls.)—				
600 Warren E	.27¼		.27¼	
600 S.R. unfiltered	.24		.24	
650 S.R. unfiltered	.26		.26	
600 flash S.R.	.27		.27	
630 flash S.R.	.31⅜		.31⅜	
Bright stock, No. 8 color	.33		.33	
Bright stock, No. 6½ color dil.	.32½		.32½	

NEUTRALS

NEW YORK—Pale Engine Oil, Bulk (vis. at 100)—				
230-3¾	.13	.13½	.13	.13½
180-3¼	.12	.12½	.12	.12½
100-2¼	.06½	.06¾	.06½	.06¾
Red Engine Oil, Bulk vis. at 100):				
300-6½	.09	.10	.09	.10
250-6	.08¾	.09¼	.08¾	.09¼
200-6	.08½	.08¾	.08½	.08¾

PARAFFIN WAX (Fully Refined)

NEW YORK (prices per pound)—				
123-125 a.m.p.	.04⅛	.04¼	.04⅛	.04¼
125-127 a.m.p.	.04¼	.04⅜	.04¼	.04⅜
130-132 a.m.p.	.04¾	.04⅞	.04¾	.04⅞
133-135 a.m.p.	.05¼	.05⅜	.05¼	.05⅜
135-137 a.m.p.	.05½	.05⅝	.05½	.05⅝

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas $1.00
Stratman, Kans. (Sept. 29, 1933) 1.08
Corsicana (heavy) (June 17, 1933)* .... .30
Other fields.....(See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co. and Empire Oil & Refining Co.
*Magnolia Petroleum Co. †Eldorado Refining Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933) ..... $.75
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933) ..... .70
Pecos County, Yates shallow pool (Sept. 29, 1933)* ..... .65
Jones and Fisher Counties..See gravity table

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.
*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers.....
.....(See gravity table)
Tomball (see note)* $1.15
Livingston (Sept. 29, 1933)† 1.00
Greta (Sept. 29, 1933) ..... .85
Refugio, light.....(See gravity table)
Refugio, heavy (Sept. 29, 1933)‡..... .85
Markham and High Island.....
.....(See Gulf Coast gravity table)
Conroe.....(See Conroe gravity table)

Note—Tomball, effective September 29, by Humble Oil & Refining Co., and October 2 by Magnolia Petroleum Co.
*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy, by Humble Oil & Refining Co.

South Central and Southwest Texas

(See note below table)

Darst Creek ..... $.87
Mirando ..... .80
Luling (Sept. 29, 1933) ..... .75
Pettus 1.05
Salt Flat ..... .87
Lytton Springs (Sept. 29, 1933) ..... .95
Duval County (Sept. 29, 1933) ..... .80
Saxet ..... .85

Note—Effective on September 29 by Humble Oil & Refining Co. in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by Humble Oil & Refining Co. and Texas Co. Effective September 29 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Iles, light (Sept. 29, 1933) ..... $.96
Iles, heavy (Sept. 29, 1933) ..... .90
Florence, Colo. (June 17, 1933) ..... .30
Fort Collins and Wellington, Colo. (June 17) .....(See Salt Creek prices)
Big Muddy (Sept. 29, 1933) 1.01
Frannie, light (Sept. 29, 1933) ..... .87
Frannie, heavy (Sept. 29, 1933) ..... .62
Salt Creek and La Barge (Sept. 9, 1933)
See Stanolind Mid-Continent price schedule
Grass Creek, light (Sept. 29, 1933) 1.18
Grass Creek, heavy (Dec. 15, 1932)..... .45
Elk Basin (Sept. 29, 1933) 1.18
Rock Creek (Sept. 29, 1933) 1.02
Dutton Creek (July 8, 1933).....
.....See Mid-Continent gravity prices

(Continued on Next Page)

Crude Oil Gravity Table

Degrees gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas and East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	5 Carson, Hutchinson and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyo.	8 Gulf Coast, Texas and Louisiana	9 Gulf Coast, Texas and Louisiana	10 Caddo, Louisiana	11 Sabine-DeSoto, Louisiana	12 Homer, Louisiana	13 Sarepta-Carterville, Louisiana	14 El Dorado, Arkansas	15 Haynesville, Louisiana	16 Miller County, Arkansas	17 Cotton Valley, Louisiana
Below 20	....	....	....	....	....	....	....	$.82	$.82	....	....	....	....	....	....	....	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....	....	....	....	....	....	....	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....	....	....	....	....	....	....	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....	....	....	....	....	....	....	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....	....	....	....	....	....	....	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....	....	....	....	....	....	....	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.63	$.69	$.71	$.75	$.75	$.65	$.62	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.65	.71	.73	.77	.77	.67	.64	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.67	.73	.75	.79	.79	.69	.66	.74
27-27.9	* 82	....	....	....	....	....	....	.98	.98	.69	.75	.77	.81	.81	.71	.68	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.71	.77	.79	.83	.83	.73	.70	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....	....	....	....	....	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.73	.79	.81	.85	.85	.75	.72	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.75	.81	.83	.87	.87	.77	.74	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.05	.77	.83	.85	.89	.89	.79	.76	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.06	.79	.85	.87	.91	.91	.81	.78	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.81	.87	.89	.92	.93	.83	.80	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.83	.89	.91	.95	.95	.85	.82	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.85	.91	.93	.97	.97	.87	.84	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.87	.93	.95	.99	.99	.89	.86	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.89	.95	.97	1.01	1.01	.91	.88	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.91	.97	.99	1.03	1.03	.93	.90	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	.93	.99	1.01	1.05	1.05	.95	.92	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	.95	1.01	1.03	1.07	1.07	.97	.94	1.92

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedules: Below 25 degrees, 76 cents; 25-25.9 degrees, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08: Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co. and Wilcox Oil & Gas Co. All others begin their schedule at below 29 degrees, 84 cents, excepting Philtex Oil Co. which begins with below 31 degrees at 88 cents.

Column 1—Effective September 29, The Texas Co. in Oklahoma, Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; The Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Philtex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; on October 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2—Effective September 29, by the Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective September 29 in the Van Pool, Van Zandt County, the Pure Oil Co. posted below 29 degrees, 84 cents, with 2 cents added for each degree up to 40 and over at $1.08.

Column 3—Effective September 29 by the Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective September 29, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 25 degrees, 63 cents, with 2 cents added for each degree up to 40 and over at 95 cents. For Standard Oil Co. of Louisiana's prices see Columns 10 to 16, inclusive.

Column 4—Effective September 29 by the Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co. and H. F. Wilcox Oil & Gas Co. On same day Philtex Oil Co. posted below 31 degrees, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents.

Column 5—Effective September 29 by the Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Philtex Oil Co. posted below 31 degrees, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents.

Column 6—Effective September 29 by the Humble Oil & Refining Co. and Tide Water Oil Co., and on September 30 by the Texas Co. which on September 29 had posted a schedule of $1.07 to $1.12, with a 1-cent spread on each degree.

Column 7—Effective September 29 by the Stanolind Oil & Gas Co.

Column 8—Effective September 29 by the Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana: 20-20.9 degrees, 84 cents, with 2 cents added for each degree upward to 34 and over at $1.12 and in Cameron Meadows and Iowa, Louisiana: Below 20 degrees, 72 cents, with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20 degrees, 70 cents, with 2 cents added for each degree upward to 34 degrees and over at $1.00; and in Black Bayou and White Castle, Louisiana: Below 20 degrees, 80 cents, with 2 cents added for each degree upward to 34 degrees and over at $1.10.

Column 9—Effective September 30, the Texas Co. (On September 29, the Texas Co. had posted a schedule 2 cents lower on each degree, but changed it on September 30.)

Columns 10, 11, 12, 13, 14, 15, 16—Effective September 29, by the Standard Oil Co. of Louisiana and Louisiana Oil Refining Co.

Column 17—Effective September 29, by the Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 36)

Sentiment in Chicago More Optimistic With Promise of Improvement Seen

By SPECIAL CORRESPONDENT

CHICAGO, Oct. 16.—A real lift has been imparted to the market tone in this center, as the result of the clearing away of distress gasoline in the last week or so. With sentiment reversed and tending along more optimistic lines, the general belief appears to be that refined market conditions, particularly gasoline market conditions, give promise once more of improvement.

Major company buying of gasoline which had been overhanging the market does not seem to have been the only factor aiding the market, although doubtless it has been the principal one. An encouraging angle is that jobbers have once more been in the market as buyers. True, their purchases have been in small lots and not extensive in the aggregate, but even this type of activity is an improvement, compared with their aloofness for the last month.

Tank car gasoline quotations once more are beginning to "mean something." Low-octane bracket motor fuel is peeping up above 4 cents again. Refiners appear to think there is a good chance for a more or less sustained improvement in the market from this point. The whole buying and selling trade, of course, agrees on the point that refinery operations have been excessive. Current understanding is that these are being pared down and are to be leveled off still more. This is one of the reasons for the current better feeling.

Tank Car Market

Betterment in the tank car market is generally considered to have put in its appearance just in time to avoid serious complications in tank wagon and service station prices. Numerous irregularities and price cutting were growing more frequent, feeding on the increased spread between tank car and laid-down prices. In general, the territorial structures have been well sustained, but this was beginning to give major interests much worry. The setting up of comprehensive machinery for code enforcement is expected to be an aid to keeping markets in good condition. In the central states this work has already started and complaints are being investigated and acted upon.

One of the things causing speculation is the disposition to be made of the cases of price cutters who sell below regular posted prices, but post their own cut price at a stated margin over the regular Q.D.A. and contend strongly that they are well within the code because they are not selling below cost. These operators in most cases are those who are known to have low marketing expenses and many of them are enjoying a large gallonage, in some cases the gallonage at their individual stations running into four figures a day. The trade at large is waiting for some pronouncement on the question of possible stated margins for low-cost operators.

Gasoline consumption in the central states, under the influence of favorable weather, has been holding up well. Jobbers are taking care of the most of their share of this business by ordering out against contracts. Few of them wish to hold much material in storage. They admit they may buy more material in the spot market soon, and they also concede they are now getting little or no offers of material, with indications that all the private siding storage gasoline is actually out of the way.

A combination of the first touch of frosty or freezing temperature on the one hand, and a strong natural gasoline market, on the other hand, is creating a better reception for high gravity gasolines, and of course a little better outlook for the high octanes. However, straight high gravity gasoline has recovered fractionally from recent lows and is now in better interest. Jobbers are using it in some sections of the northern and north central states for competition against other sellers, particularly where snappy performance is desired.

The "Q" gasoline of course, remains a prominent element in the retail motor fuel situation in this region. There is some agitation for a revamping of octane brackets in this connection. In most regions third-grade gasoline is not getting much play, although most of the price cutting has been confined to that grade.

Naphthas and Solvents

Naphthas and solvents are quiet, and show little price change. Competition is not taking the form of extreme price cuts for this business. The undertone appears strong. Lubricants are holding well, although the total volume of business is not particularly heavy. Much interest is centered upon the question of retail motor oil prices. Many contend the full advance of refinery bright stock and neutral products has not yet been witnessed. Meanwhile, some sellers of motor oils whose cost of doing business is high are calling for higher retail prices. One major company is reported ready to advance its quart premium oil price 5 cents. Others think the times still inopportune for an advance.

Virtually all grades of petroleum products, including and below the kerosene classification have been quiet, and about unchanged, but some have been more active than others. A little kerosene has been offered below ruling prices, partly out of East Texas, but the plowing demand has kept the market fairly well cleaned up. Little good kerosene appears

(Continued on Page 39)

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	...	$.65	$.65	$.65	$.65	...	$.65	$.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	...	.66	.65	.65	.65	...	.65	...	...	...	.65
16-16.9	.66	.65	.72	.73	.69	.73	...	.69	.67	.68	.65	...	.65	...	...	...	.65
17-17.9	.69	.65	.75	.76	.73	.76	...	.72	.70	.71	.65	...	.68				.68
18-18.9	.72	.65	.78	.80	.76	.79	...	.75	.74	.74	.65	...	.71	.61	.61	.59	.71
19-19.9	.75	.66	.81	.83	.80	.82	...	.78	.78	.78	.65	...	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	...	.81	.82	.81	.66	...	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	...	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	...	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.83	.89	.93	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	...	1.00	1.01	.90	.95	1.00	...	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	...	1.04	1.04	.94	.98	1.04	...	.89	.90	.96	.89	.88	...	.96
27-27.9	1.00	.98	1.04	...	...	1.07	.97	...	1.08	...	...	.94	.99	.93	.91	...	.99
28-28.9	1.03	1.02	1.07	..	...	1.10	1.01	...	1.11	...	...	.98	1.02	.97	.94	...	1.02
29-29.9	1.06	1.05	1.09	..	...	...	1.04	...	1.15	...	...	1.01	1.05	1.01	.97	...	1.05
30-30.9	1.09	1.10	1.12	..	...	...	1.08	...	...	...	...	1.05	1.09	1.05	1.00	...	1.09
31-31.9	...	...	...	...	...	...	1.12	...	...	...	...	1.08	1.12	1.09	...	...	1.12
32-32.9	...	...	...	...	...	...	1.15	...	...	...	...	1.13	1.15	1.13	...	...	1.15
33-33.9	...	...	...	...	...	...	...	...	...	...	...	1.16	1.18	1.17	...	...	1.18
34-34.9	...	...	...	...	...	...	...	...	...	...	...	1.19	1.21	...	...	...	1.21
35-35.9	...	...	...	...	...	...	...	...	...	...	...	1.23	...	...	...	...	...
36-36.9	...	...	...	...	...	...	...	...	...	...	...	1.26	...	...	...	...	...
37-37.9	...	...	...	...	...	...	...	...	...	...	...	1.30	...	...	...	...	...
38-38.9	...	...	...	...	...	...	...	...	...	...	...	1.34	...	...	...	...	...

Additional Standard Oil Quotations

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over $1.11.

The Texas Co. posted in Shiel Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon and Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same prices as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 26 degrees and over; Coyote Hills, 23 degrees and over; Richfield, 25 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over, Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills, and Coalinga.

Crude Oil Prices

(Continued from Preceding Page)

Lance Creek (Dec. 16, 1932)	.92
Poison Spider (Mar. 5, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage (Jan. 18, 1933)	.53
Lost Soldier (Sept. 30, 1933)	.83
Hamilton Dome (Dec. 16, 1932)	.28
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera	1.18
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.70
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Sept. 29, 1933)	.70

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark (all grades)	$.70
Urania, La. (Oct. 3, 1933)	.75
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective October 4, 1933)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.
(Effective October 4, 1933)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.12
Penna Grade Oil in Eureka Pipe Line Lines	2.07
Penna Grade Oil in Buckeye Pipe Line Lines	1.92
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.32

PENNZOIL CO.
(Effective October 4, 1933)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$2.37
Group B (Includes Titusville district.)	2.36
Group C (Includes Turkey and Tidioute districts.)	2.35
Group D (Includes Bear Creek and Porkey districts.)	2.34
Group E (Includes Edeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinsua districts. Price depends on length of pipe line haul to plant at Oil City.	2.32

PURE OIL CO.
(Effective October 4, 1933)

Cabin Creek, W. Va.	$2.17
Bradford Hollow, W. Va.	2.17
Kelly Creek, W. Va.	2.17

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.30
Illinois	1.23
Princeton, Ind.	1.23
Plymouth	Shut in
Western Kentucky	1.18
Midland, Mich. (Sept. 30, 1933)	1.02
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.23
Hart County, Ky. (Oct. 1, 1933)	1.18

*Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Hart County, Kentucky, crude purchased by Stoll Refining Co. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs*	2.17
Turner Valley (September 11, 1933):†	
Clear naphtha	$3.50
Discolored naphtha	3.26
Crude oil, 50 gravity	2.93
Crude oil, 45 to 49.9	2 26
Crude oil, 40 to 44.9	1.61

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Mexico

Panuco*	$.466

*F.o.b. ship, based on August transactions and exclusive of production and export taxes and bar dues.

Ector County Discovery Better Than Expected; Highest Gravity Test in Wichita Falls Area

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Oct. 16.—The discovery well opening the fourth pool in Ector County, Broderick & Calvert's No. 1 Cowden, in Section 25, Block 44, Township 2s, T.&P. Survey, continues to clean out following two shots last week. The hole continues to cave and a sand pump is being used to clean out the hole which is bottomed at 4,338 feet. The well is averaging around 200 bbls. per day while cleaning out, somewhat better production than was formerly expected, although the two shots brought about the increase. It should show a still greater gain in production when the hole is cleaned up.

The Humble Pipe Line Co. is laying a short connecting line from the Penn Pool, 5 miles to the south, to connect with this new area. It is also stringing pipe from the Cowden area in northern Ector County to connect with the Fuhrman and also with the Tripplehorn wells to the north in Andrews County.

Upton County

Gulf Production Co.'s No. 103 McElroy, in Section 197, Block F, Upton County, is drilling slowly, making only 30 feet of hole per day in the hard Permian lime. It is down to 7,309 feet.

Loffland Brothers' No. 1 Tubbs, in Section 9, Block 27-B, western Crane County, is drilling at 4,065 feet. It will set 8¼-inch casing below the sulphur water horizon struck in the Tubbs discovery well about one-quarter of a mile to the southwest. It has approximately 250 feet more to drill before picking up the pay found in that well at 4,295 feet. The Tubbs discovery well has been producing with tools and whipstock in the hole since its discovery in 1931, but recently stopped flowing. The company is now pulling the pipe and will sidetrack the tools and clean out the hole in hopes of bringing the well back on production and possibly making a better producer out of it.

Reagan County

Group No. 1 Oil Corp.'s No. 9-B University, in Section 36, Block 9, in the Big Lake Field, Reagan County, shows signs of making a producer and extending production nearly a half mile east in the Ordovician lime producing area. It cored saturated lime from 8,572-84 feet and from 8,584-92 feet shutting down at the latter depth to cement 7-inch casing with 1,400 sacks of cement at 8,543 feet. If this test makes a producer it will force an east offset by Group No. 2 Oil Corp. which holds acreage to the east on which there is no production either from the regular Big Lake pay or the Ordovician lime. It will force Group No. 2 to drill its first deep test in the field.

New Locations

There were five locations staked in the Permian Basin during the week. Two were in Pecos County, one in Winkler, one in Ward and one in Howard County. The majority were in producing areas. Six completions were reported. One was a recompletion. The four oil producers yielded a new initial production of only 564 bbls. for the entire district.

Anderson-Prichard Corp., of Oklahoma City, Okla., has obtained an extension until January 1, 1934, on its leases on an 80,000-acre block recently assembled in northwestern Culberson County. It was scheduled to spud a 5,000-foot test by October 26, Olsen Drilling Co., of Tulsa, contracting to drill the test which will be located in or near Section 45, Block 69, public school land, which is on the W. M. Borders ranch.

The O'Brien-Hutchings area in Ward County is to be extended another mile farther west by Eppenauer Drilling Co.'s No. 1 Stanolind-University in Section 2, Block 16. It topped the pay from 2,650-54 feet and logged an increase from 2,-666-96 feet. It swabbed 100 bbls. per day in drilling below 2,674 feet in lime.

WICHITA FALLS

Texas Co.'s No. 3 Les K. Johnson wildcat discovery in western Foard County, which is producing the highest gravity oil yet uncovered in the Wichita Falls district, and which opened a new deep lime producing horizon, will no doubt have considerable effect in future wildcatting in the surrounding area. The well has been choked to 1,000 bbls. per day which the Gulf Pipe Line Co. is taking, and the company plans another test in the near future probably on a location about 2,000 feet northwest.

Deals have been closed on several leases on nearby ranches, and other tests may be put down by companies and operators who have taken acreage on the basis of this discovery. It is by far the best strike registered in the district in a long time. Production is coming from 3,571-77 feet.

C. W. Boller and Grisham's No. 1 Farmer in the Farmer Ranch area, southwestern Archer County, has a new wildcat producer in the making. It topped hard lime at 1,414-15 feet and sandy lime from 1,415-28 feet swabbing 75 bbls. before treated with 1,000 gallons of acid but the result has not been received.

Pipe line runs in the district averaged 53,845 bbls. per day this week, a gain of 1,926 bbls. per day over the previous week.

PANHANDLE DISTRICT

Skelly Oil Co.'s No. 1 Webb in Section 61, Block 25, H.&G.N. Survey, was completed about 10 days ago for the best well the district has seen in some time. On a five-day proration test made by a field man for the Railroad Commission, the well averaged 963 bbls. per day. The well is a southeast extension to the Morse Pool, Gray County. It topped the granite wash pay at 2,476-80 feet.

Production in the district averaged 45,105 bbls. per day this week. This is a decrease of 2,380 bbls. per day under the previous week.

COMPLETIONS IN WICHITA FALLS

Archer County

Fain and McGaha's No. 1 Ferguson, oil sand 646-54 feet, initial production 15 bbls., total depth 654 feet; No. 2 Ferguson, oil sand, base 648-65 feet, initial production 5 bbls. of oil and 2 bbls. of water, total depth 672½ feet; No. 3 Ferguson, base of sand 649-56 feet, initial production 12 bbls., total depth 660 feet; No. 4 Ferguson, oil sand 649-56 feet, initial production 12 bbls., total depth 660 feet; No. 5 Ferguson, oil sand 644-55 feet, initial production 4 bbls., total depth 655 feet; No. 6 Ferguson, oil sand 645-58 feet, initial production 30 bbls., total depth 658 feet; No. 7 Ferguson, oil sand 648-61 feet, initial production 20 bbls. of oil and 5 bbls. of water, total depth 661 feet; No. 8 Ferguson, oil sand 646-59 feet, initial production 30 bbls., total depth 659 feet. Panhandle Refining Co.'s No. 1 Wilson, dry and abandoned, total depth 1,605 feet. H. E. Wilkins' No. 1 Decker, dry and abandoned, total depth 462 feet.

Bonner Oil Co.'s No. 1 Abercrombie, sandy lime 1,188-1,200 feet, initial production 80 bbls. after acid treatment, total depth 1,205 feet; No. 2 Abercrombie, sandy lime 1,184-96 feet, initial production 65 bbls., total depth 1,198 feet. Burns and Long's No. 1 Turbeville, dry and abandoned, total depth 1,070 feet. F. P. Cullum's No. 8 Falls-Ellis, sandy lime 1,140-61½ feet, initial production 250 bbls., treated with acid, total depth 1,161½ feet; No. 2 W. J. Logan, sandy lime 1,161-75 feet, initial production 70 bbls., total depth 1,175 feet. W. R. Duke's No. 1 Anderson, dry and abandoned, total depth 1,336 feet. J. C. Hamer's No. 1 Longley, oil sand 956-63½ feet, initial production 40 bbls. first 24 hours pumping, total depth 963½ feet. W. B. Hamilton's No. 1 Cartwright, lime 1,169-81 feet, initial production 300 bbls., total depth 1,181 feet, treated with acid; No. 2 Cartwright, lime 1,157-63 feet, initial production 300 bbls., total depth 1,-163 feet.

Helena Oil & Gas Co.'s No. 4 Ray, show of oil 1,115-20 feet, initial production 100 bbls., total depth 1,120 feet; No. 5 Ray, hard sand 1,113-27 feet, initial production 100 bbls. first 24 hours flowing, total depth 1,127 feet. King and Krahenbuhl's No. 2 Sheckell, sandy lime 1,181-90 feet, initial production 200 bbls., total depth 1,190 feet. Perkins and Cullum's No. 5 Falls-Hanzen, sandy lime 1,109-32 feet, shot 90 quarts, initial production 60 bbls., total depth 1,137 feet; No. 12 Falls-Tikten, sandy lime 1,121-45 feet, shot 100 quarts, initial production 75 bbls., total depth 1,145 feet. Schultz and Weaver's No. 12 Gree, sandy lime 1,144-62 feet, initial production 150 bbls. after acid treatment, total depth 1,162 feet. D. L. Wolf's No. 1 Downing, dry and abandoned, total depth 1,266 feet.

Clay County

Metzner and Gerard's No. 4 Thornberry, dry and abandoned, total depth 394 feet. Texas Co.'s No. 2 Hansard, oil sand 1,106-18½ feet, initial production 30 bbls., total depth 1,139 feet, plugged back to 1,118 feet.

Montague County

Bridwell Oil Co.'s No. 1 York, dry and abandoned, total depth 1,262 feet.

Jack County

Calbe Oil Co.'s No. 1 Richards, dry and abandoned, total depth 550 feet. Denenger and others' No. 1 Allen, oil sand 511-22 feet, initial production 10 bbls., total depth 522 feet. McKee Drilling Co.'s No. 1 Voyles, dry and abandoned, total depth 560 feet.

Wilbarger County

New Deal Oil Co.'s No. 2 Wheeler, oil sand 1,281-84½ feet, initial production 18 bbls., total depth 1,284½ feet. Waggoner Refining Co.'s No. 2 Waggoner, oil sand 1,938-1,941 feet, initial production 36 bbls. in 13 hours pumping, total

(Continued on Page 42)

Wildcat Operations in West Texas

Week Ending October 16

BREWSTER COUNTY

Company, well, farm name, section and block—	Remarks
C. M. Joiner's No. 1 McIntyre	T.D. 1,000 ft.

COKE COUNTY

C. D. Hagerty et al's No. 1 Gaston, in Joseph Young Sur. No. 11	T.D. 710 ft.

CONCHO COUNTY

Mintex Oil Co.'s No. 2 Waring Estate, 660 ft. from N line, 150 feet from W line SW ¼ Sec. 2120, A. T. Robinson Sur.	Underreaming at 1,460 ft.

CRANE COUNTY

Gulf Prod. Co.'s No. 1 Edwards, 330 ft. from S line and 330 ft. from E line of Sec. 21, Blk. B-18, Pu lic School Land Sur.	Location.
Loffland Bros.' No. 1 Tubbs, 1,334 ft. from N line, 1,320 ft. from W line, Sec. 9, Blk. 27-B, P.S.L. Sur.	Drlg. 4,065 ft.

ECTOR COUNTY

Broderick & Calvert et al's No. 1 E. F. Cowden, 2,240 ft. from E line, 330 ft. from S line of Sec. 25, Blk. 44, Twp. 2s, T.&P. Sur.	T.P. 4,147 ft.; shot 40 qts. 4,325-35 ft.; shot 200 qts. 4,138-83 ft.; hole bridged; now cleaning out hole.
Landreth Production Co. & Llano Oil Co.'s No. 1 O. B. Holt, 660 ft. from S and W lines of N half of Sec. 20, P.S.L. Sur.	Shot 260 qts. from 4,232-4,297 ft.; flowed 435 bbls. first 24 hrs. after shot; T.D. 4,313 ft.
Skelly Oil Co.'s No. 1 Addis, 990 ft. from N line and 2,200 ft. from E line of Sec. 35, Blk. 43, Twp. 2s, T.&P.R.R. Sur.	Spudding.
Fred Turner's No. 1-B F. V. Addis, 440 ft. from the E line and 330 ft. from S line of Sec. 35, T.&P.R.R. Sur., Blk. 42, Twp. 2s	Prepare to spud.

FISHER COUNTY

Condor Pet. Co.'s No. 1 Holley, 1,170 ft. W and 660 ft. from N lines of E half, Sec. 6, Blk. R, W. E. Richardson Sur.	Moving in material and S.D.
Cranfill & Reynold's No. 3 W. M. Flannigan, 165 ft. S of N line and 330 ft. W of E line of W half Sec. 200, Blk. 1, B.B.B.&C.Ry. Sur.	Drlg. 1,760 ft.
Cranfill & Reynold' No. 3 T. Willingham, Sec. 199, Blk. 1, B.B.B.&C.Ry. Sur.	Drlg. 2,580 ft.
Merry Bros. and Perini's No. 1 J. J. Steele, 330 ft. E and 150 ft. N of SW cor. NE Sec. 210, B.B.B.&C. R.R. Sur.	Moving in material.
Mid-Continent Petroleum Corp.'s No. 1 A. E. Pardue, 660 ft. N of S line and 330 ft. W of E line of NW Sec. 202, Blk. 1, B.B.B.&C.Ry. Sur.	Will treat with acid; T.D. 3,107
Roeser & Pendleton's No. 1 T. E. Hill, 660 ft. N of S line, 330 ft. E of W line of N half NW Sec. 193, Blk. 1, B.B.B.&C.Ry. Sur.	Swabbing 55 bbls. per hour after acid treatment; T.D. 3,093 ft.
Southern's No. 1 King, 660 ft. from N and 330 ft. from W line of SW Sec. 192, B.B.B.&C. Sur.	Spudding.
Southern Oil Co.'s No. 1-A Pardue, 2,310 ft. from S and 990 ft. from E lines of Sec. 202, B.B.B.&C. Sur.	T.D. 2,654 ft.
Texas Co.'s No. 3 T. A. Jean, 165 ft. N of S line and 330 ft. E of W line of E half Sec. 201, Blk. 1, B.B.B.&C.Ry. Sur.	Drlg. 1,940 ft.

Open New Texas Field in Anderson County, Thirty Miles From the Nearest Production

By L. E. BREDBERG

DALLAS, Tex., Oct. 16.—The Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 Monnig (Lone Lake Plantation), Anderson County test, has proved conclusively that another oil field has been uncovered in East Texas, this time in the southern part of the district and located miles from any other field. Boggy Creek, approximately 30 miles to the northeast, and the Mexia Fault Line Field, approximately 35 miles to the west, are the two nearest producing areas to the new area. Some are of the opinion that this field will be only a small pool like Boggy Creek, but this cannot be proved until more wells are put down on acreage surrounding the first test on the large block held by the two companies.

Gas sand was first drilled in this test from 5,216-37½ feet making an estimated 20,000 to 40,000 feet of gas the latter part of September. Another such sand was picked up below this depth and another test made at 5,265 feet, the well showing a smaller amount of gas but no oil. Seven-inch casing was then cemented at 5,148 feet and the hole was carried down to a total depth of 5,468 feet in hard white sand without picking up an increase of gas or any oil or water. This total depth is 321 feet in the Woodbine series. The test was then plugged back to 5,275 feet, allowed to set several days, then put on a test. The first test showed gas only; a bull plug on a line leading to the separator was blown out and the well shut in until repairs could be made.

First Tests Disappointing

The first production tests made on the well were disappointing, the well looking good for only a gasser although heavily saturated cores previously taken made it look sure for a producer. After rigging up flow lines from casing and tubing the well was allowed to blow around 10,000,000 feet of gas for four hours on October 14. A short time later it was allowed to blow through two more lines, making four in all. It was during this heavy withdrawal of gas that the fluid started showing in the well, a test of the fluid sample that afternoon showing 25 per cent water and basic sediment contamination. This test was made through 2-inch tubing which was swung at 5,290 feet and through casing which was set at 5,240 feet. The test was choked all the time, as was the case when the gas sands were previously tested.

During the night of October 15 the well flowed between 35 and 42 bbls. of fluid per hour, showing 35 to 40 per cent b.s. and water and making a total of 840 bbls. of fluid during the 24 hours on the first test. The well was shut in at 5 a. m. on October 16 and opened at 7 a. m. From 7 to 8 a. m. it flowed through one-half inch choke on tubing and made 18 bbls. of fluid which tested 27 per cent b.s. and 1 per cent salt water. The first sample of oil showed it to test 41 degrees gravity and a later sample tested lower, 36.1 degrees gravity, which is similar to the gravity of the Fault Line Field at Mexia.

While flowing through four lines from casing and tubing on October 15 casing pressure was 1,700 pounds. When flowed through tubing and on one-half inch choke the pressure increased to 2,150 pounds. The water shows a decrease when produced through tubing and an increase when flowed through casing and tubing, which will necessitate a continuous choke and possible flow through tubing. The increase was from 1 per cent while flowing through tubing to 10 per cent when flowed through casing. The well is now flowing at a steady rate into two 1,000-bbl. tanks.

Salt Water Question

The main question is in regard to the salt water and whether it is coming from the bottom of the hole or from some point above. There is a possibility some water may be coming through the plug and up from the bottom, and in drilling other wells in the vicinity the companies will probably not carry them so far into the Woodbine sand.

Wells drilled too deep on the west side of the East Texas Field show various amounts of salt water, consequently operators in that field have learned to take but a few feet of sand on that side of the field to prevent drilling into water. However, the two companies drilling this test had no offset well logs to guide them and cored ahead slowly in hopes of picking up heavier oil saturation. Failing in that they plugged back to prevent water from coming in when the well was tested, and may plug back still farther or recement in an effort to stop the influx of salt water.

This well, no doubt, is considered as a flank well by many geologists and operators, top of the structure to be proven later when more wells are drilled on the block. Humble Oil & Refining Co. has made a location and is moving in material for a test on the H. R. Deitz farm in the Simon Sanchez Survey No. 6, just west of the river, over into Freestone County. This location is approximately 2 miles northwest of the Long Lake discovery well and will be an interesting test, proving whether the field will extend in that direction and that distance. J. R. Hughes has made location for a test in the northeast corner of the H. A. Shaw 138-acre tract in the Simon Sanchez Survey No. 5, a mile west of the Humble location. This test will probably not be drilled until the Humble test is completed. The Standard Oil Co. of Kansas test has not yet been spudded on the A. W. Johnson farm, near Magnolia Ferry in the Simon Sanchez Survey. It is approximately 2 miles to the northeast of the discovery well.

The two companies holding the 24,000-acre Long Lake Plantation block are expected to stake location for a second test on the block immediately. It is understood that there have been negotiations between these two companies and the Gulf Pipe Line Co. in regard to the latter transporting oil from this area. In case such a deal is consummated the Tide Water Oil Co. and Texas Seaboard Oil Co. will lay a connecting line from the well to the main line of the Gulf Pipe Line Co. which has its southern terminal on the Gulf Coast. However, the Humble Pipe Line Co. has a line running near this well and may make a bid for the oil. The company has recently become aggressive in seeking connections for more oil both in East and West Texas, and is destined to lay a line into this area if its affiliates, the Humble Oil & Refining Co., makes a producer out of the test which it will soon spud west of the discovery well.

The Missouri Pacific Railroad has a switch on its branch line at Long Lake, about a mile from the well. A loading rack could readily be built at this switch and a short line laid to connect with the well if the two owning companies decided to ship oil by tank car until a connecting line is laid from a nearby major pipe line. The companies themselves will no doubt lay a line from the area as soon as they drill one or more wells and further prove their block to production. Such a line will not be over 125 miles in length.

Leon County

Shell Petroleum Corp.'s No. 1 Beggs in the Carter Survey, Leon County, considered as on a strike with the Long Lake discovery, has increased in importance and operators are again watching this well closely. Total depth is 5,723 feet. Seven-inch casing was cemented at 5,685 feet. Top of the Woodbine was logged at 5,618 feet, making the present total depth 105 feet in the Woodbine. Results of the Shell Petroleum Corp. and others' No. 1 Phillips in the Swayze Survey, the first test on this block, is causing the operators to pipe this well much higher and carry on more careful coring. No. 1 Phillips test was abandoned at 6,300 feet after plugging back and testing two good saturated streaks of sand, neither of which produced any oil on the tests.

Another Anderson Test

Another interesting test is slated for a block of acreage in the extreme northwestern corner of Anderson County but so far no report has been announced as to the location. Other tests for the county can be expected since the Long Lake test has definitely proved an oil field for the county and lease and royalty buying will take a spurt throughout this and neighboring counties. Leasing and royalty buying has been sporadic in the area since the first showing of gas in the test, but no large blocks have been assembled for other tests, so far. However, the situation has changed considerably and a more rapid and bigger play can be expected in the southern tier of East Texas counties, especially in the counties surrounding Anderson.

The Long Lake well is in an enviable location as far as transportation facilities are concerned. A railroad runs within a mile of the well; a concrete highway is but a short distance farther north and the municipal airport of Palestine is nearby. Supply houses will no doubt be located at the Long Lake switch or be placed on the highway, although the town of Palestine is only 12 miles east on the concrete highway and a good location. How-

East Central Texas Wildcats

Week Ending October 16

Company, well, farm name, section and block—	Remarks:
ANDERSON COUNTY	
Standard of Kansas' No. 1 A. W. Johnson, 565 ft. from N line and 420 ft. from E and W lines of 22.8-ac. tract, Simon Sanches Sur.	Derrick.
Tide Water Oil Co. and Seaboard Oil Co.'s No. 1 Long Lake Plantation, 3,700 ft. due S of S cor. of Tom Reeves estate, 97-ac. tract, Simon Sanches Sur.	Plugged back to 5,298 ft.; set csg. at 5,240 ft.
ANGELINA COUNTY	
J. M. Seward et al's No. 1 L. J. Dearman, 500 ft. from S and W lines of Dearman S 20-ac. tract, 2½ miles SE of Zavalla, J. T. Peavy Sur.	Rig up.
BOWIE COUNTY	
R. W. Lynn and W. R. Rolfe's No. 1 Mrs. R. D. Hart, 330 ft. out of NE cor. of Hart 20-ac. tract, 1 mile E of Nash, Thomas Price Sur.	Location.
ELLIS COUNTY	
Beckham et al's No. 1 L. S. R. Wood, 150 ft. from N line and 330 ft. from E line of Wood 186-ac. tract, A. D. Lagarza Sur.	Derrick.
FRANKLIN COUNTY	
Van Emon et al's No. 1 O. S. Maxton, 910 varas W and 910 varas S of NE cor. of survey, John Brown Sur.	Derrick.
FREESTONE COUNTY	
Hughes et al's No. 1 H. A. Shaw, 330 ft. out of NE cor. of H. A. Shaw 138-ac. tract, Simon Sanches Sur. No. 5	Location.
Humble Oil & Refining Co.'s No. 1 Dietz Brothers, 1,000 ft. out of southerly SE cor. of 1,000-ac. tract, Simon Sanches Sur. No. 6	Location.
GREGG COUNTY	
Clover Leaf Petroleum Co.'s No. 1 M. T. Cole, 209 ft. from N line and center of E and W lines of survey, A. Parks Sur.	Drlg. 2,942 ft.
Elliott et al's No. 1 Benson, 175 ft. from S line and center E and W lines of tract, W. P. Chisum Sur.	Location.
Glazier et al's No. 1 Bumpass, 710 ft. from S line and 7,690 ft. from W line of survey, W. H. Castleberry Sur.	Derrick.
Claude Lee's No. 1 Black, 1,680 ft. from S line and 1,080 ft. from E line of survey, H. R. Hokit Sur.	Spudding.
Magnolia Petroleum Co.'s No. 6 Clem Jones, 4,710 ft. from S line and 870 ft. from W line of survey, G. W. Hooper Sur.	Derrick.
Sun Oil Co.'s No. 10 William Pentecost, 1,600 ft. from S line and 1,270 ft. from E line of survey, Mary Scott Sur.	Location.
A. W. Tarrant's No. 2 Sabine River, Tract No. 1, 430 ft. W and 540 ft. N of SE cor. of M. Dillard Sur.	Waiting on cmt. to set; T.D. 3,569 ft.
S. K. Vierson's No. 4-A Andy Givens, 680 ft. from S line and 134 ft. from E line of survey, R. W. Smith Sur.	Location.
Yount Lee Oil Co.'s No. 1 V. A. Skipper and Garner, 330 ft. from N line and 1,870 ft. from W line of survey, J. Skillern Sur.	Derrick.
HENDERSON COUNTY	
Campbell and Champlin's No. 1 R. S. Ansley, 168 varas S and 623 varas W of NE cor. of lease, 6 miles SE of Buffalo, N. H. Thompson Sur.	Derrick.
Bill LaRue et al's No. 1 G. L. Smith, 330 ft. out of NW cor. of G. L. Smith 149-ac. tract, 1 mile SE of Athens, Thomas Helms Sur.	Drlg. 1,710 ft.
LEON COUNTY	
Shell Petroleum Corp.'s No. 1 Beggs, center of 123.5-ac. tract, John Carter Sur.	Set 7-in. csg. 5,688 ft.; T.D. 5,723 ft.; P.B. 2,695-2,798 ft.; drlg. 3,115 ft.

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ever, only small stores need be carried near the well as all supply companies have warehouses in the East Texas Field and can quickly truck material and equipment over the good highways to the new field. The East Texas Field is only 80 miles from the new discovery.

Wildcat Tests

While the one strike was being made this week in East Texas there were six other wildcat tests abandoned. One, Roeser & Pendleton, Inc.'s No. 1 Billett in the Cecil Bobo Survey, southwestern Henderson County, was given up as a dry hole at 4,535 feet. Elevation is 264 feet. McElreath and Suggett and Pure Oil Co.'s No. 1 Ferguson in the W. P. Wyche Survey, same county, was also abandoned. Total depth is 4,986 feet. Elevation is 382 feet. J. M. Scott and others abandoned their No. 2 Pannill in the A. Cherino Survey, Kaufman County. Total depth is 3,140 feet.

The Limestone County test of F. A. Scweiser and others on fee land was abandoned at 1,337 feet. This test is in A. Vincent Survey.

Ajo Oil Co. abandoned its Red River test on the Nichols and Daniels farm in the H. B. Shaw Survey, at a total depth of 3,538 feet. Elevation is 373 feet.

Another test has been abandoned on the south end of the Van Field, Van Zandt County. Everett and others drilled this well on the J. J. Goode farm in the David Rose Survey.

Locations and Completions

Only two wildcat locations were staked this week. There were 71 completions and 72 locations reported. Production continues to run above the field's allowable. The field averaged 476,925 bbls. per day for the week ending October 13. Distribution increased to 561,175 bbls. per day or 85,250 bbls. per day above reported production. Tank car shipments also increased during the week, averaging 5,620 bbls. per day while movement by trunk lines averaged 506,450 bbls. One more refinery was shut down. This makes a total of 24 refineries shut down, leaving 31 operating.

COMPLETIONS IN EAST TEXAS DISTRICT

North Gregg County

Arkansas Fuel Oil Co.'s No. 13 Burnside, top sand 3,477 feet, initial production 48 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,502 feet; No. 14 Burnside, top sand 3,483 feet, initial production 47 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,508 feet. Atlantic Oil Producing Co.'s No. 15 Turner, top sand 3,521 feet, initial production 75 bbls. per hour through open tubing, total depth 3,580 feet; No. 9 Wilson, top sand 3,586 feet, initial production 75 bbls. per hour through open tubing, total depth 3,620 feet. Atlantic and Sun Oil Co.'s No. 37 M. Hays, top sand 3,522 feet, initial production 80 bbls. per hour through open tubing, total depth 3,679 feet. Atlantic Oil Producing Co.'s No. 39 M. Hays, top sand 3,501 feet, initial production 85 bbls. per hour through open tubing, total depth 3,550 feet; No. 41 Hays, top sand 3,523 feet, initial production 85 bbls. per hour through open tubing, total depth 3,560 feet; No. 42 Hays, top sand 3,513 feet, initial production 75 bbls. per hour through open tubing, total depth 3,559 feet.

J. G. Beard's No. 4 W. L. Fuller, top sand 3,687 feet, initial production 50 bbls. per hour through open tubing, total depth 3,737 feet. Cranfill & Reynolds' No. 2 fee, top sand 3,460 feet, initial production 20 bbls. in one-quarter hour through open tubing, total depth 3,477 feet. Long Drilling Co.'s No. 1-B Owens, top sand 3,605 feet, initial production 65 bbls. per hour through open tubing, total depth 3,631 feet. Magnolia Petroleum Co.'s No. 9 H. L. Foster, top sand 3,573 feet, initial production 120 bbls. per hour through open tubing, total depth 3,602 feet; No. 5 G. W. Tate, top sand 3,442 feet, initial production 120 bbls. per hour through open tubing, total depth 3,569 feet. Selby Oil & Gas Co.'s No. 23-B Suavely heirs, top sand 3,569 feet, initial production 68 bbls. in one-half hour through 1-inch tubing choke, total depth 3,583 feet; No. 7-C Snavely heirs, top sand 3,558 feet, initial production 72 bbls. in one-half hour through 1-inch tubing choke, total depth 3,583 feet. Shell Petroleum Corp.'s No. 5 M. Salter, top sand 3,698 feet, initial production 17 bbls. in one-quarter hour through open tubing, total depth 3,707 feet. Sun Oil Co.'s No. 16 Haynes, top sand 3,609 feet, initial production 53 bbls. per hour through open tubing, total depth 3,674 feet; No. 10 Satterwhite, top sand 3,551 feet, initial production 65 bbls. per hour through open tubing, total depth 3,585 feet.

South Gregg County

Badgett and others' No. 1 A. A. King, top sand 3,671 feet, initial production 15 bbls. in one-quarter hour through tubing, total depth 3,690 feet. East Texas Refining Co.'s No. 4 E. Mitchell, top sand 3,569 feet, initial production 25 bbls. in one-quarter hour through open tubing, total depth 3,610 feet. Gulf Production Co.'s No. 54 Helburn, top sand 3,505 feet, initial production 55 bbls. per hour through open tubing, total depth 3,535 feet. W. W. McVey and others' No. 1 Baptist Church, top sand 3,544 feet, initial production 15 bbls. per day pumping, total depth 3,599 feet. John Mabee's No. 10 M. T. Cole, top sand 3,526 feet, initial production 125 bbls. per hour through open tubing, total depth 3,537 feet. Powell & Irion's No. 1 Radford, top sand 3,634 feet, initial production 60 bbls. per hour through open tubing, total depth 3,644 feet. Invincible Oil Co.'s No. 10 Weiss, top sand 3,555 feet, initial production 85 bbls. per hour through open tubing, total depth 3,575 feet.

Reserve Petroleum Co.'s No. 4 Rosa Brown, top sand 3,518 feet, initial production 75 bbls. per hour through open tubing, total depth 3,590 feet. Rhoads Drilling Co.'s No. 25 Sabine River, top sand 3,514 feet, initial production 50 bbls. in one-half hour through tubing, total depth 3,534 feet; No. 27 Sabine River, top 3,540 feet, initial production 50 bbls. in one-half hour through open tubing, total depth 3,558 feet. Sneed and others' No. 3 G. Davis, top sand 3,576 feet, initial production 60 bbls. per hour through open tubing, total depth 3,604 feet. Texas Co.'s No. 20 M. T. Cole, top sand 3,493 feet, initial production 95 bbls. per hour through open tubing, total depth 3,552 feet; No. 9 R. B. Wells, top sand 3,617 feet, initial production 80 bbls. per hour through open tubing, total depth 3,627 feet. U-Tex Oil Co.'s No. 5 M. T. Cole, top sand 3,520 feet, initial production 75 bbls. per hour through open tubing, total depth 3,553 feet.

North Rusk County

East Texas Refining Co.'s No. 11 D. Wills, top sand 3,626 feet, initial production 20 bbls. in one-quarter hour through open tubing, total depth 3,636 feet. Gulf Production Co.'s No. 19-C C. E. Christian, top sand 3,665 feet, initial production 65 bbls. per hour through three-quarters inch tubing choke, total depth 3,679 feet. Humble Oil & Refining Co.'s No. 78 L. D. Crim, top sand 3,615 feet, initial production 75 bbls. per hour through open tubing, total depth 3,630 feet; No. 28-B S. S. Laird, top sand 3,567 feet, initial production 65 bbls. per hour through open tubing, total depth 3,633 feet; No. 30-B S. S. Laird, top sand 3,560 feet, initial production 100 bbls. per hour through open tubing, total depth 3,638 feet; No. 17-A J. E. Sexton, top sand 3,714 feet, initial production 75 bbls. per hour through open tubing, total depth 3,778 feet.

South Rusk County

Acme Oil & Refining Co.'s No. 2 M. L. Thompson, top sand 3,664 feet, initial production 65 bbls. per hour through tubing, total depth 3,701 feet. Cullen Oil Co.'s No. 1 C. P. Camp, top sand 3,565 feet, initial production 20 bbls. per day pumping, total depth 3,610 feet. East Texas Oil & Refining Co.'s No. 2 F. Barksdale, top sand 3,698 feet, initial production 45 bbls. in one-half hour through open tubing, total depth 3,752 feet; No. 2 T. Barksdale, top sand 3,686 feet, initial production 40 bbls. in one-half hour through open tubing, total depth 3,725 feet; No. 5-C Ras Pool, top sand 3,684 feet, initial production 75 bbls. per hour through open tubing, total depth 3,726 feet.

Falcon Oil Co.'s No. 13 T. O. Mason, top sand 3,636 feet, initial production 30 bbls. in one-half hour through open tubing, total depth 3,670 feet. Farrell Drilling Co.'s No. 2 Hammett, top sand 3,660 feet, initial production 500 bbls. first 24 hours flowing by heads, total depth 3,667 feet. Gulf Production Co.'s No. 2 W. B. Perry, top sand 3,654 feet, initial production 11 bbls. per hour through three-quarters inch tubing choke, total depth 3,660 feet. Hannibal Oil Corp.'s No. 2 D. Deason, top sand 3,623 feet, initial production 25 bbls. per hour through open tubing, total depth 3,673 feet.

Humble Oil & Refining Co.'s No. 7 O. Blackwell, top sand 3,668 feet, initial production 93 bbls. per hour through open tubing, total depth 3,675 feet; No. 6 Mary Day Cladwell, top sand 3,649 feet, initial production 61 bbls. per hour through open tubing, total depth 3,674 feet; No. 6 June Day Florey, top sand 3,690 feet, initial production 68 bbls. per hour through three-quarters inch tubing choke, total depth 3,718 feet; No. 30-A Kangerga, top sand 3,658 feet, initial production 75 bbls. per hour through open tubing, total depth 3,691 feet; No. 33-A R. E. L. Silvey, top sand 3,593 feet, initial production 75 bbls. per hour through open tubing, total depth 3,688 feet; No. 12 C. J. Thompson, top sand 3,674 feet, initial production 75 bbls. per hour through open tubing, total depth 3,706 feet. H. L. Hunt Production Co.'s No. 8 W. P. Moore, top sand 3,633 feet, initial production 63 bbls. per hour through open tubing, total depth 3,645 feet; No. 10 W. P. Moore, top sand 3,617 feet, initial production 75 bbls. per hour through open tubing, total depth 3,635 feet. Lion Oil & Refining Co.'s No. 12-B H. Brooks, top sand 3,656 feet, initial production 70 bbls. per hour through open tubing, total depth 3,750 feet.

McDonald Brothers' No. 2-A Hanna, top sand 3,612 feet, initial production 55 bbls. per hour through open tubing, total depth 3,642 feet. R. J. McMurray's No. 2 A. D. Blackwell, top sand 3,649 feet, initial production 85 bbls. per hour through open tubing, total depth 3,669 feet. Mid-Kansas Oil & Gas Co.'s No. 47 M. M. Cross, top sand 3,614 feet, initial production 68 bbls. per hour through open tubing, total depth 3,629 feet; No. 19 S. H. Moore, top sand 3,620 feet, initial production 76 bbls. per hour through open tubing, total depth 3,650 feet. Milford Oil Co.'s No. 4 Thrash, top sand 3,720 feet, initial production 30 bbls. in one-half hour through open tubing, total depth 3,770 feet. George Ray's No. 6 J. B. Wilson, top sand 3,595 feet, initial production 93 bbls. per hour through open tubing, total depth 3,607 feet. Retsal Drilling Co.'s No. 3 J. P. Maxwell, top sand 3,550 feet, initial production 25 bbls. per day swabbing, total depth 3,710 feet. Sayre Oil Co.'s No. 5 S. Stone, top sand 3,650 feet, initial production 63 bbls. in 20 minutes through open tubing, total depth 3,672 feet.

Sun Oil Co.'s No. 5 B. H. Schuler, top sand 3,668 feet, initial production 25 bbls. per hour through open tubing, total depth 3,665 feet. Texas Co.'s No. 5 J. W. Turner, top sand 3,725 feet, initial production 90 bbls. per hour through open tubing, total depth 3,760 feet. Venerable & McClannahan's No. 16 J. A. Birdwell, top sand 3,626 feet, initial production 149 bbls. per hour through open tubing, total depth 3,652 feet. C. A. Walker's No. 1 Mealy Johnson, W. G. Tutt Survey, abandoned, total depth 3,832 feet.

Smith County

W. L. Sessions' No. 4 Stone, top sand 3,792 feet, initial production 20 bbls. in one-quarter hour through tubing, total depth 3,795 feet.

Upshur County

Atlantic Oil Producing Co.'s No. 12 Mayer, top sand 3,594 feet, initial production 80 bbls. per hour through open tubing, total depth 3,605 feet. Humble Oil & Refining Co.'s No. 21 J. K. Edwards, top sand 3,620 feet, initial production 37 bbls. per hour through three-quarters inch tubing, total depth 3,644 feet; No. 5 E. A. Smith, top sand 3,657 feet, initial production 62 bbls. per hour through three-quarters inch tubing choke, total depth 3,672 feet; No. 16 I. D. Smith, top sand 3,623 feet, initial production 54 bbls. per hour through three-quarters inch tubing choke, total depth 3,652 feet; No. 20 I. D. Smith, top sand 3,637 feet, initial production 69 bbls. per hour through three-quarters inch tubing choke, total depth 3,667 feet. Mudge Oil Co.'s No. 8-A Richardson, top sand 3,702 feet, initial production 75 bbls. per hour through open tubing, total depth 3,725 feet. Reynolds' No. 3 Miller, top sand 3,743 feet, initial production 60 bbls. per hour through open tubing, total depth 3,772 feet. Steen Drilling Co.'s No. 9 Loden, top sand 3,682 feet, initial production 19 bbls. per hour through open tubing, total depth 3,735 feet. Stroube & Stroube's No. 6 R. J. Mackey, top sand 3,623 feet, initial production 60 bbls. per hour through open tubing, total depth 3,630 feet. Werby and Refugio Oil Co.'s No. 4 Reed, top sand 3,626 feet, initial production 40 bbls. in one-half hour through open tubing, total depth 3,628 feet.

WILDCAT COMPLETIONS

Henderson County

McElreath & Suggett's No. 1 Ferguson, top Pecan Gap 2,511 feet, top Austin chalk 3,650 feet, base 3,965 feet, top Woodbine sand 4,190 feet, top Georgetown lime 4,983 feet, top red beds 4,317 feet, dry and abandoned, 3,986 feet; W. P. Wyche Survey; elevation 382 feet. Roeser & Pendleton's No. 1 L. R. Billett, top Pecan Gap 2,268 feet, base 2,390 feet, top Austin chalk 3,244 feet, base 3,670 feet, top sand 4,029 feet, top red beds 4,164 feet, tested 2,000 feet of salt water in 10 minutes, abandoned, total depth 4,535 feet; Cecil Bobo Survey; elevation 264 feet.

Kaufman County

J. M. Scott and others' No. 2 Pannill, top Austin chalk 1,400 feet, base 1,900 feet, top Woodbine sand 2,371 feet, top Georgetown lime 2,955 feet, dry and abandoned 3,140 feet; Cherino Survey.

Limestone County

F. A. Scweiser and others' No. 1 fee, top Austin chalk 700 feet, base 1,020 feet, top sand 1,300 feet, dry and abandoned, total depth 1,337 feet; A. Vincent Survey.

Red River County

Ajo Oil Co.'s No. 1 Nichols and Daniels, dry and abandoned, total depth 3,538 feet; elevation 373 feet; H. B. Shaw Survey.

Van Zandt County

Everett and others' No. 1 J. J. Goode, top sand 3,100 feet, dry and abandoned, total depth 3,168 feet.

Sentiment in Chicago Is More Optimistic

(Continued from Page 36)

to be pressing for sale. Statistics on it are regarded favorable.

Heating Oils

Chilly weather is making consumers and the trade alike think of heating products. Little new buying is reported, with most distributors holding quantities in storage. Few price changes have been made. Prime white distillate is firm. The good gas oils also are having little trouble bringing steady prices. Supplies all along the line are reported fairly ample at the moment. Zero fuels show little material change.

Industrial products are spotty. Demand is coming from various industries in small quantities. The industrial gas oil market apparently is a wide and free one, with various quotations reported. Railroad takings of fuels are reaching fairly good totals.

Patent Granted Cover

THE United States Patent Office has just granted Letters Patent No. 1,930,987, dated Oct. 17, 1933, covering a method and apparatus of testing the productivity of formations encountered in drilling wells. The following is one of a number of claims which was granted:

> *"A method of testing the productivity of a formation encountered in a well containing drilling fluid involving the insertion of only a single string of pipe into the well to make a test, which includes lowering a test string into the well through the drilling fluid with a packer carried by the string and a valve inlet at the lower end of the string closed against the entrance of fluid from the well, setting the packer above the formation and opening the valve to permit cognate fluid from the formation to enter the inlet, closing the valve to prevent the subsequent entrance of fluid from the well through the inlet and releasing the packer, and raising the test string with the inlet closed against the entrance of fluid from the well to remove an entrapped sample."*

The Halliburton Oil Well Cementing Company is pleased to announce that it has been granted an exclusive license under the above patent throughout the United States.

The method and apparatus of testing formations as described and claimed in United States Letters Patent No. 1,930,987 was first offered to the trade in the spring of 1926 by Erle P. Halliburton. In order to establish the invention it was found desirable to put sev-

ing Formation Testers

eral men in the field to make free introductory tests over a period of several months at great expense to Mr. Halliburton.

In February, 1927, a two page advertisement was carried in the leading trade journals describing the Method and Apparatus of Testing the Productivity of Formations Encountered in Drilling Wells, claimed in United States Letters Patent No. 1,930,987, which became known as the Halliburton Method and Apparatus. Thus, through the efforts of Mr. Halliburton, the trade was convinced of the value of the invention and thereafter a whole flock of inventors filed applications in the United States Patent Office on testing devices of one form or another. Patents have already been granted on many of these applications but each is restricted to some minor form of apparatus. The manufacture and/or use of any testing device now being used, of which we have any knowledge, would constitute an infringement of United States Letters Patent No. 1,930,987.

The original Application, Serial No. 87,323, was filed in the United States Patent Office on February 10, 1926, and the chief reason for the long delay in granting a patent on the application resulted from the necessity of having to oppose the claims of some ten other inventors who claimed to be the original inventor of the same subject matter.

Although this long siege of litigation was very expensive, yet Mr. Halliburton has granted us an exclusive license under his patent that will enable us to carry on the testing service at the same reasonable price that it was first offered to the industry, and it is our aim to give the utmost in efficient and satisfactory testing service.

HALLIBURTON OIL WELL CEMENTING CO.

Duncan, Oklahoma

West Texas Fields

(Continued from Page 37)

depth 1,941 feet. Webb and others' No. 1 Waggoner, dry and abandoned, total depth 1,915 feet.

Wichita County

Rollin Bennett's No. 1 Goetze, dry and abandoned, total depth 468 feet. George W. Cooper and others' No. 4 Waggoner, dry and abandoned, total depth 1,450 feet.

Young County

Belknap Oil Co.'s No. 1 Belknap, dry and abandoned, total depth 731 feet. Brazelton Brothers' No. 10 Belknap, show of oil 664-68 feet, oil sand 668-73 feet, initial production 18 bbls., total depth 673 feet. F. E. Butler's No. 1 Jones, oil sand 509-10 feet, initial production 10 bbls., total depth 510 feet. W. R. Cooper's No. 1 Baye, dry and abandoned, total depth 700 feet. S. G. Glover's No. 2 Johnson, oil sand 620-21½ feet, initial production 55 bbls., total depth 621½ feet; No. 2 Johnson, dry and abandoned, total depth 615 feet.

HY Oil Co.'s No. 11 Larimore, oil sand 692-712 feet, initial production 100 bbls., total depth 712 feet. Hensen, Tidewell and Lindsey's test, lime with show of oil 3,875-94 feet, shot 130 quarts 3,815-90 feet, initial production 250 bbls. oil and 15 bbls. of salt water, total depth 3,954 feet, plugged back to 3,894 feet. Holbrook and Wood's No. 8 Watson, oil sand 568-72 feet, initial production, no gauge, key well, total depth 611 feet, plugged back to 522 feet. L. A. Long's No. 2 Garvey, oil sand 755-58 feet, treated with acid, initial production 20 bbls., total depth 758 feet. J. J. Moran's No. 1 Rushing, dry and abandoned, total depth 860 feet. J. D. Nix' No. 1 Baldwin, dry and abandoned, total depth 700 feet. S. M. Park's No. 1 McDonald, oil sand 601-08 feet, initial production 12 bbls., total depth 608 feet. Petroleum Producers Co.'s No. 3 Belknap, oil sand 681-86 feet, initial production 55 bbls., total depth 686 feet; No. 5 Belknap, oil sand 677-88 feet, initial production 125 bbls., total depth 688 feet. W. F. Powell's No. 1 Casey, dry and abandoned, total depth 895 feet. O. T. Thomas' No. 1 Harmon, dry and abandoned, total depth 601 feet. White, Duncan and Beavers' No. 3 Wolf, oil sand 671-77½ feet, initial production 200 bbls., total depth 677½ feet. Nash and Windfohr's No. 4 Graham-Vick, oil sand 2,665-93 feet, initial production 100 bbls., total depth 2,693 feet.

RANGER DISTRICT COMPLETIONS

Brown County

Charter Oil Co.'s No. 3 Reeves, oil sand 1,274-78 feet, initial production 175 bbls. pumping and flowing, total depth 1,278 feet.

Callahan County

Putman Oil Co.'s No. 1 J. H. Mitchell, gas sand 382-98 feet, initial production 174,000 feet of gas, total depth 403 feet. Snebold's No. 1 J. R. Taylor, dry and abandoned, total depth 667 feet. Joe Williams' No. 1 North Williams, temporarily abandoned, total depth 917 feet

Coleman County

R. A. L. Guffy and others' No. 1 R. B. Fowler, temporarily abandoned, total depth 536 feet.

Cooke County

F. T. Johnson's No. 1 J. Roll, sandy lime 1,081-92 feet, initial production pumping 50 bbls. in 24 hours, after acid treatment, total depth 1,092 feet.

Parker County

C. B. Welsh's No. 1 Lassiter, dry and abandoned, total depth 3,106 feet.

Shackelford County

Cranfill & Reynolds' No. 8 J. B. Matthews, sand 811-18 feet, initial production 15 bbls., total depth 825 feet. Gilman & McMurry's No. 1 Dawson, junked hole, and skidded rig. Vera G. Power's No. 1 Mrs. Sammons, temporarily abandoned. Roeser & Pendleton's No. 6 Morris Buie, oil sand 1,597-1,609 feet, initial production 100 bbls., total depth 1,613 feet. W. F. Snebold's No. 3 Spears, show of oil 695-705 feet, shot with 15 quarts, initial production 5 bbls. of oil and 4,000,000 feet of gas, total depth 715 feet, plugged back to 705 feet.

Throckmorton County

J. A. Bearman's No. 3 C. Tuton, ... and abandoned, total depth 734 feet; No. 4-C Tuton, sand 754-65 feet, initial production 10 bbls., total depth 765 feet.

COMPLETIONS IN WEST TEXAS

Howard County

Carl Patterson and others' No. 1 Harry Hyman (recompleted), top pay 1,327-43 feet, old total depth 1,347 feet, drilled deeper to 1,352 feet, initial production 7½ bbls. of oil per day, total depth 1,352 feet.

Ector County

D. D. Thomas and others' No. 1 W. P. Edwards, temporarily abandoned, total depth 3,227 feet. Fred Turner's No. 1-A F. V. Addis, top pay 3,902 feet, initial production 366 bbls. per day flowing, total depth 4,274 feet.

Irion County

P. A. Johnson's No. 1 Mertzon townsite, show of oil 1,377-78 feet, and 1,392-98 feet, dry and abandoned, total depth 1,406 feet.

Loving County

William Little's No. 1 Reagan and McElvain, top pay 4,218-25 feet, shot with 180 quarts 4,189-4,232 feet, initial production 175 bbls. per day flowing through casing, total depth 4,232 feet.

Ward County

S. A. Thompson's No. 4 W. D. Johnson, top pay 2,292 feet, initial production 15 bbls. per hour flowing through 2-inch tubing, total depth 2,536 feet.

COMPLETIONS IN PANHANDLE

Gray County

Skelly Oil Co.'s No. 1 Webb, pay 2,474-80 feet, initial production 963 bbls. for a five-day average, total depth 2,480 feet. Phillips Petroleum Co.'s No. 2 Combs-Worley, new pay 2,895-2,925 feet, initial production 232 bbls., total depth 2,925 feet; (old well drilled deeper); No. 3 Combs-Worley (old well drilled deeper), new pay 2,910-30 feet, initial production 250 bbls., total depth 2,930 feet; No. 2 Jackson (old well drilled deeper), new pay 2,970 feet, initial production 110 bbls., total depth 3,054 feet; No. 3 Johns (old well drilled deeper), new pay 3,200-55 feet, initial production 100 bbls., total depth 3,255 feet. Sinclair Prairie Oil Co.'s No. 1 Combs-Worley (old well drilled deeper), new pay 2,860-2,915 feet, initial production 220 bbls., total depth 2,915 feet. Texas Co.'s No. 9 Combs-Worley (old well drilled deeper), increase in pay 2,969-75 feet, initial production 310 bbls., total depth 3,002 feet.

Wheeler County

Piney Oil & Gas Co.'s No. 1 Koons, pay 2,282-98 feet, initial production 255 bbls. on pump, total depth 2,298 feet.

Hutchinson County

H. Steckol's No. 1 Whittenburg, pay 2,988-3,030 feet, initial production 50 bbls., total depth 3,032 feet.

A.A.P.G. TO MEET IN DALLAS

Dallas, Tex., has been selected for the annual meeting of the American Association of Petroleum Geologists to be held next March. A committee headed by Dr. Frederic H. Lahee, chief geologists, Sun Oil Co., Dallas, extended the invitation to the executive committee of the association at a meeting held there last week. The invitation was accepted and the announcement made by Frank R. Clark, president, A.A.P.G., who was in Dallas with other officials attending an executive session.

The exact date for the meeting has not been set but it will be during March in accordance with the usual custom.

East Central Texas Wildcats

(Continued from Page 38)

MORRIS COUNTY

Argo and Key's No. 1 Hall, 330 ft. from NW cor. of survey, 3 miles NE of Dangerfield, L. Jordan Sur.... Derrick.

RUSK COUNTY

Arcadia Refining Co.'s No. 2 Griffin and Barnes, 6,950 ft. from S line and 150 ft. from E line of survey, J. B. De Cadena Sur. ..... Drlg. 2,990 ft.

George F. Hudson's No. 1-A Phillips, 30 ft. NE of No. 1, 3 miles E of Minden, N. Villareal Sur. ..... Drlg. 1,480 ft.

Hunt Production Co.'s No. 2 B. F. Maxwell, 820 ft. from N line and 2,510 ft. from W line of survey, R. H. Penny Sur. ..... Drlg. 3,593 ft.

Leath and Bateman's No. 1 W. W. Hammett, 250 ft. from S line and 330 ft. from E line of survey, J. H. Sparks Sur. ..... Location.

P. & A. Oil Co.'s No. 2 Brightwell, 700 ft. from N line and 1,320 ft. from E line of survey, R. W. Smith Sur. ..... Waiting on cmt. to set 3,647 ft.

Patterson Drlg. Co.'s No. 3 Brock Estate, 2,320 ft. from N line and 100 ft. from E line of survey, R. W. Smith Sur. ..... Spudding.

SMITH COUNTY

Alex McCutcheon's No. 4 Stone, 890 ft. from N line and 960 ft. from W line of survey, D. Shaw Sur. .... Drlg. 3,500 ft.

W. L. Sessions' No. 5 Stone, 1,000 ft. from S line and 910 ft. from W line of survey, D. Shaw Sur. ..... Location.

UPSHUR COUNTY

Magnolia Petroleum Co.'s No. 2 C. Brooks, 330 ft. from S and W lines of 50-ac. tract, J. F. Davis Sur. .... Drlg. 3,420 ft.

Skelly Oil Co.'s No. 4 J. W. Free, 2,020 ft. from N line and 5,380 ft. from E line of survey, G. W. Hooper Sur. ..... Waiting on cmt. to set.

Stroube and Stroube's No. 6 J. Mackey, 990 ft. from S line and 330 ft. from E line of survey, D. Reed Sur. ..... Waiting on cmt. to set; T.D. 3,630 ft.

B. F. Traywick et al's No. 1 M. Vaughn, 330 ft. from S line and 330 ft. from W line of 108-ac. tract, 2 miles NW of Big Sandy, P. B. Standifer Sur. ..... Drlg. 1,800 ft.

VAN ZANDT COUNTY

Everett Drilling Co.'s No. 1 J. J. Goode, 1,100 ft. from E line and 330 ft. from N line of lease, W. Rose Sur. ..... Drlg. 1,425 ft.

B. F. Frost et al's No. 1 G. J. Luther, 200 ft. from S line and 75 ft. from E line of survey, M. Gross Sur. ..... S.D. 1,211 ft.

Gray and Williams et al's No. 1 Paschall, 590 ft. from E line and 200 ft. from N line of 39-ac. tract, 5 miles NW of Jackson, D. Y'Barbo Sur. ..... Set surface csg. 88 ft.

J. O. Griffin's No. 1 Bruce & Gibbard, 1,000 ft. from S line and 330 ft. from E line of 134-ac. tract, G. Martinez Sur. ..... Derrick.

Pure Oil Co.'s No. 5 J. J. Murphree, 250 ft. S of N line and 200 ft. E of W line of J. J. Murphree 82.5-ac. tract, John Walling Sur. ..... Waiting on pumping equipment; T.D. 2,971 ft.

Pure Oil Co.'s No. 3 R. M. Butler, 900 ft. S of N line and 987 ft. W of R. M. Butler 89.16-ac. tract, Davis Rose Sur. ..... Set surface csg. 310 ft.

George Ray et al's No. 1 C. Wilson, 1,100 ft. from S line and 2,420 ft. from W line of 172-ac. tract and survey, 6 miles W of Myrtle Springs, H. Cotes Sur. .. Spudding.

Ray Drilling Co.'s No. 1 J. W. Mallory, 1,150 ft. from S line and 150 ft. from W line of 217-ac. tract, John Walling Sur. ..... Derrick.

Wildcat Operations in West Texas

(Continued from Page 37)

Texas-Inland Oil Co.'s No. 1 First National Bank of Hamlin, 590 ft. N and 330 ft. W of SE cor. of W half NE Sec. 191, B.B.B.&C.R.R. Sur. ..... Rig up.

GAINES COUNTY

R. H. Gill et al's No. 1 Crews, 1,320 ft. from S and 1,320 ft. from W line of Sec. 9, Blk. A-20, P.S.L. Sur... Location.

GLASSCOCK COUNTY

Schermerhorn Oil Co.'s No. 6 Kloh, 330 ft. from S line and 1,980 ft. from E line of Sec. 13, Blk. 33, Twp. 2s, T.&P.R.R. Sur. ..... Waiting on cement to set 2,316 ft.

Tribal Oil Co.'s No. 5-B Edwards, 330 ft. from S line and 330 ft. from E line of Sec. 6, Blk. 33, Twp. 2s, T.&P. Sur. ..... T.D. 620 ft.

H. O. Wootin's No. 2-A W. P. Edwards, 660 ft. from S line and 660 ft. from E line of Sec. 17, T.&P.R.R. Sur., Blk. 33, Twp. 2s ..... Drlg. 240 ft.

HOWARD COUNTY

Continental Oil Co.'s No. 4 Eason, 2,310 ft. from S line and 1,334 ft. from W line of Sec. 6, Blk. 32, Twp. 2s, T.&P. Sur. ..... Drlg. 1,700 ft.

Continental Oil Co.'s No. 8 Settles, 1,980 ft. from N line and 1,625 ft. from W line of Sec. 133, Blk. 29, W.&N.W. Sur. ..... Drlg. 910 ft.

Donnelly & Norman's No. 1 Magnolia Petroleum Co. (Bell), 330 ft. from N line and 330 ft. from W line of the N half of SW of Sec. 12, T.&P.R.R. Sur., Blk. 30, Twp. 1s ..... Drlg. 2,010 ft.

S. B. Dorn et al's No. 1 J. P. Davis, 2,310 ft. from N line and 2,310 ft. from E line of Sec. 2, T&P.R.R. Sur., Blk. 30, Twp. 1s ..... Rig up.

Group No. 1 Oil Co. and Continental Oil Co., 2,640 ft. from N line and 1,980 ft. from E line of Sec. 5, T.&P.R.R. Sur., Blk. 32 ..... Spudding 40 ft.

L. C. Harrison et al's No. 2 Texas Land & Mortgage Co., 2,310 ft. from E line and 330 ft. from the S line of Sec. 4, T.&P.R.R. Sur., Blk. 30, Twp. 1s ..... Location.

Plymouth Oil Co.'s No. 9 Kloh et al, 2,640 ft. from the N. line and 1,980 ft. from W line of Sec. 5, Blk. 32, T.&P.R.R. Sur., Twp. 2s ..... Location.

Joe Rusk et al's No. 2 G. M. Dodge Estate, 330 ft. from N line and 2,310 ft. from the E line of Sec. 9, H.&T.C.R.R. Sur., Blk. 30, Twp. 2s ..... Location.

Sinclair Prairie Oil Co.'s No. 9 Dodge, 310 ft. from N line and 1,625 ft. from W line of Sec. 11, Blk. 30, Twp. 1s, T.&P.R.R. Sur. ..... Location.

Southern Oil Co.'s No. 1 Denman, 2,310 ft. from N line and 330 ft. from W line of Sec. 10, Blk. 30, Twp. 1s, T.&P.R.R. Sur. ..... Bldg. derrick.

Southern Oil Co.'s No. 1 Denman, 1,650 ft. from N line and 330 ft. from W line of Sec. 14, Blk. 30, Twp. 1s, T.&P.R.R. Sur. ..... Bldg. derrick.

Ungren & Frazier's No. 1 Davis, 330 ft. from S line and 990 ft. from W line of Sec. 2, Blk. 30, Twp. 1s, T.&P. Sur. ..... Location.

IRION COUNTY

R. D. Covington's No. 1 Mitchell, 150 ft. from S line and 150 ft. from W line of Sec. 724, C. Wimsch Sur. ..... Drlg. 950 ft.

Perry Fox's No. 1 Reach, 170 ft. E and 45± ft. S of the most southerly NW cor. of Sec. 1,026, H.E.&W.T. Sur. ..... Drlg. 395 ft.

JONES COUNTY

Roeser & Pendleton's No. 1 W. H. Evans, 300 ft. N and 9,300 ft. E of SW cor. of E 101 acres of N 202 acres of Sec. 4, Blk. 15, T.&P.R.R. Sur. ..... Spudding.

Dyer's No. 1 Odom, 200 ft. from S and 170 ft. from W of N 320 acres, G. Zumwalt Sur. ..... T.D. 2,040 ft.

LOVING COUNTY

R. L. Allen's No. 1 fee, 4,290 ft. from NE line, 330 ft. from SE line, Sec. 32, H.&T.C. Sur. ..... Location.
R. L. Allen's No. 2 fee, 4,290 ft. from NE line, 990 ft. from SE line, Sec. 32, Blk. 33, H.&T.C. Sur. ..... Location.
R. L. Allen's No. 3 fee, 4,290 ft. from NE line, 990 ft. from NW line, Sec. 32, Blk. 33, H.&T.C. Sur. ..... Location.
R. L. Allen's No. 4 fee, 4,290 ft. from NE line, 330 ft. from NW line, Sec. 32, Blk. 33, H.&T.C. Sur. ..... Location.
Eppenauer Drlg. Co.'s No. 1-C Allen, 330 ft. from NW line, 2,310 ft. from SW line, Sec. 90, Blk. 1, W.&NW Sur. ..... Location.
Eppenauer Drlg. Co.'s No. 1-A Victor, 330 ft. from SW and 338 ft. from SE of NW of N half Sec. 4, Blk. 2, W.&N.W. Sur. ..... Rigging up standard tools

PECOS COUNTY

Mac T. Anderson's No. 1 E. M. Roots Estate, 2,500 ft. from the N line and 330 ft. from W line of Sec. 11, G.C.&S.F.R.R. Sur., Blk. 118 ..... Location.
M. H. Black et al's No. 1 E. E. Powell et al, 150 ft. from NE line and 150 ft. from SE line of Sec. 102, H.&G.M.R.R. Sur., Blk. 10 ..... Location.
M. D. Bryant's No. 1 Robertson, 375 ft. S and 150 ft. E from NW cor. of Robertson Sur. (this well is east offset to Mid-Kansas Oil & Gas Co.'s No. 23 Smith-Taylor) ..... T.D. 465 ft.; bad hole.
Culberson Bros.'s No. 15-B Monroe, 725 ft. from N line and 1,380 ft. from E line of Sec. 39, Blk. 194, G.C.&S.F.R.R. Sur. ..... Location.
Easter-McCurdy's No. 1-A Smith, 840 ft. from S line and 1,030 ft. from E line of Sec. 27, Blk. 149, G.C.&S.F. Sur. ..... Location.
Humble Oil & Refining Co.'s No. 1 White, Baker, 1,320 ft. from N and E lines of Sec. 44, Blk. Z, T.C. Sur. ..... T.D. 5,159 ft.; csg. parted 5 jts from bottom.
Kemper & Kimberlin et al's No. 2 D. B. Gregg et al, 2,490 ft. from NW line and 1,470 ft. from NE line of Sec. 101, H.&G.M.R.R. Co. Sur., Blk. 10 ..... Location.
Mid-Kansas O. & G. Co.'s No. 18 Smith-Taylor, 1,296 ft. from S line, 1,390 ft. from W line, Sec. 33, G. C.&S.F. Sur., Blk. 194 ..... Location
Mid-Kansas Oil & Gas Co.'s No. 21 Smith-Taylor, 1,700 ft. from S line and 275 ft. W of northerly NW cor. of Fred Turner, Jr., Sur., but located in Sec. 33, Blk. 194, G.C.&S.F. Sur. ..... Prepare to drill in: T.D. 1,170 ft.
Mid-Kansas Oil & Gas Co.'s No. 22 Smith-Taylor, 250 ft. from S line and 324 ft. from W line of NW cor. of Fred Turner, Jr., Sur. No. 2, but located in Sec. 33, Blk. 194, G.C.&S.F. Sur. ..... Drlg. 708 ft.
Mid-Kansas Oil & Gas Co.'s No. 23 Smith-Taylor, 332 ft. S of N line of Sec. 33 and 160 ft. from W line of Robertson Sur., Sec. 33, Blk. 194, G.C.&S.F.R.R. Sur. ..... Drlg. 825 ft.
Mid-Kansas Oil & Gas Co.'s No. 33-A I. G. Yates, 205 ft. from N line and 250 ft. from W line of NW cor. of Fred Turner, Jr., Sur. No. 3, but located in I. G. Yates Sur., A-8195 ..... Drlg. 1,350 ft.
Mid-Kansas Oil & Gas Co.'s No. 34-A I. G. Yates, 150 ft. from N line and 250 ft. from E line of NW cor. of Fred Turner, Jr., Sur. No. 4, but located in I. G. Yates Sur., A-8195. ..... T.P. 1,105 ft.; flowed 35 bbls. of oil per hr.; T.D. 1,259 ft.
Mid-Kansas Oil & Gas Co.'s No. 35-A, 250 ft. from N line and 324 ft. from E line of NW cor. of Fred Turner, Jr., Sur. No. 2, but located in I. G. Yates Sur., A-8195. ..... Bldg. road.
Sproles & O'Neal's (rec.) No. 2-A Fred Turner, Jr., 196 ft. from N line, 300 ft. from W line of Fred Turner, Jr., Sur. No. 1 ..... Location.
Sproles & O'Neal's (rec.) No. 4-A Fred Turner, Jr., 1,640 ft. from N line, 250 ft. from W line of Fred Turner, Jr., Sur. No. 1 ..... S.D. 1,019 ft.
Sproles & O'Neal's (rec.) No. 5-A Fred Turner, Jr., 250 ft. from N, 250 ft. from W of C SE cor. of Fred Turner, Jr., Sur. No. 1 ..... Location.
Sproles & O'Neal's No. 7-A Fred Turner, 280 ft. from S line, 250 ft. from W line of Fred Turner, Jr., Sur. No. 1 ..... Location.
Sproles & O'Neal's No. 8-A Fred Turner, Jr., 560 ft. from S line, 550 ft. from E line of Fred Turner Jr., Sur. ..... Location.
Sproles & O'Neal's No. 1-B Fred Turner, Jr., 250 ft. from N line, 308 ft. from E line of Fred Turner, Jr., Sur. ..... Rig up.
Sproles & O'Neal's No. 2-B Fred Turner, Jr., 250 ft. from N line, 305 ft. from W line of Fred Turner, Jr., Sur. ..... Drlg. 1,345 ft.
Sproles & O'Neal's No. 3-B Fred Turner, Jr., 356 ft. from S line, 250 ft. from W line of Fred Turner, Jr., Sur. ..... Location
Sproles & O'Neal's No. 4-B Fred Turner, Jr., 717 ft. from S line, 250 ft. from E line of Fred Turner, Jr., Sur. No. 2 ..... Location
Sproles & O'Neal's No. 1-C Fred Turner, 250 ft. from N line, 250 ft. from W line of Fred Turner, Jr., Sur. ..... Location.
Sproles & O'Neal's No. 2-C Fred Turner, Jr., 205 ft. from N line, 205 ft. from E line of Fred Turner, Jr., Sur. No. 3 ..... Drlg. 1,300 ft.
Sproles & O'Neal's No. 1-D Fred Turner, Jr., 150 ft. from N line, 250 ft. from W line of Fred Turner Sur. No. 41 ..... Tested 21 bbls. per hour; T.D. 1,266 ft.
Trans-Texas Oil Co.'s No. 1 C. M. Anderson, 330 ft. from the S line and 330 ft. from the E line of Sec. 27, Blk. 50, Twp. 9, T.&P.R.R. Sur. ..... Location.

REAGAN COUNTY

Big Lake Oil Co.'s No. 12-C University, 928 ft. from N, 740 ft. from E line of Sec. 12, Blk. 2, University land ..... Drlg. 8,120 ft.
Big Lake Oil Co.'s No. 14-C University, 725 ft. from S line and 2,730 ft. from E line of Sec. 25, Blk. 9, University Land Sur. ..... Rig up.
Big Lake Oil Co.'s No. 15-C University, 660 ft. from E line and 660 ft. from S line of Sec. 25, Blk. 9, University Land Sur. ..... Rig up.
Continental Oil Co.'s No. 9-B University, 1,900 ft. from S line, 1,305 ft. W of E line of Sec. 39, Blk. 9, University Land Sur. ..... Drlg. 8,380 ft.

RUNNELS COUNTY

Agnew et al's No. 1 H. B. Fowler, 150 ft. S and W of NE cor. of Sec. 33, N. Travis Sur. No. 533 ..... Drlg. 505 ft.
Golden Pet. Co.'s No. 2 McMillan, Subdv. 22, N. Travis Sur. ..... Moving in material.
B. C. Mann et al's No. 1 H. E. Wade, 150 ft. from S and 1,650 ft. from W line, Subdv. No. 8, Norvel Travis Sur. No. 533 ..... Drlg. 420 ft.

TOM GREEN COUNTY

J. R. Midlock's No. 1 Frank Garlitz, 150 ft. from S line and 840 ft. from E line of J. H. Mueller Sur. No. 2,201 ..... S.D. 550 ft.

UPTON COUNTY

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. ..... Drlg. 7,309 ft.

WARD COUNTY

Abell Brothers' No. 1 Archenhold et al, 2,310 ft. from NE line and 330 ft. from SE line of Sec. 23, H.&T.C. Sur., Blk. 5 ..... Drlg. 1,400 ft.
Atlantic Oil & Prod. Co.'s No. 4 W. D. Johnson, 330 ft. from NE line and 990 ft. from SE line of NE half of Sec. 9, H.&T.C. Sur., Blk. 34 ..... Drlg. 2,195 ft.
Atlantic Oil & Prod. Co.'s No. 9 Johnson, 330 ft. from NE line and 990 ft. from NW line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... T.D. 1,491 ft.
Atlantic Oil & Prod. Co.'s No. 10 Johnson, 990 ft. from NE line and 330 ft. from NW line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Location.
Atlantic Oil & Prod. Co.'s No. 11 Johnson, 2,310 ft. from NE line and 1,650 ft. from SE line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Location.
Atlantic Oil & Prod. Co.'s No. 12 Johnson, 990 ft. from SE line and 990 ft. from NE line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Location.
Atlantic Oil & Prod. Co.'s No. 13 Johnson, 330 ft. from NE line and 330 ft. from SE line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Location.
Atlantic Oil & Prod. Co.'s No. 14 Johnson, 330 ft. from NE line and 2,310 ft. from NW line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Location.
Atlantic Oil & Prod. Co.'s No. 15 Johnson, 330 ft. from SE line and 1,650 ft. from NE line of Sec. 9, Blk. 34, H.&T.C. Sur. ..... Location.
George Bentley et al's No. 1 C. Bergman, 330 ft. from NE line and 2,310 ft. from NW lines of Sec. 26, Blk. 5, H.&T.C. Sur. ..... T.D. 2,650 ft., plugged back to 2,470 ft., fishing.
George Bentley et al's No. 1 A. Emory, 1,830 ft. from NE line and 2,310 ft. from NW line of Sec. 26, Blk. 5, H.&T.C. Sur. ..... T.D. 2,301 ft.
California Oil Co.'s No. 1 J. F. York, 330 ft. from NW line and 330 ft. from SW line of Sec. 10, Blk. 34, H.&T.C. Sur. ..... Location.
Eastland Oil Co.'s No. 2 Johnson, 1,980 ft. from SE line and 1,980 ft. from SW line of Sec. 24, Blk. 34, H.&T.C. Sur. ..... Drlg. 670 ft.
Eppenauer Drlg. Co.'s No. 1 University, 350 ft. from N and 440 ft. from E of S half of Blk. 16 ..... Drlg. 2,678 ft.
Gulf Prod. Co.'s No. 22 Hutchings, 330 ft. from N line and 330 ft. from W line of Sec. 4, Blk. F, G.M.M. B.&A. Sur. ..... Drlg. 1,705 ft.
Gulf Prod. Co.'s No. 27 O'Brien, 990 ft. from N line and 330 ft. from E line of Sec. 17, Blk. F, G.&M.M.B.&A. Sur. ..... Location.
Gulf Prod. Co.'s No. 36 O'Brien, 330 ft. from N line and 330 ft. from E line of Sec. 17, Blk. F, G.M.M.B.&A. Sur. ..... Drlg. 1,285 ft.
Jack Leidecker et al's No. 1 A. Archenhold et al, 2,310 ft. from NE and 2,310 ft. from NW line of Sec. 23, H.&T.C.R.R. Sur., Blk. 5 ..... Drlg. 2,637 ft.
Sinclair Prairie Oil Co.'s No. 2 H. Archenhold, 330 ft. from NE lines and 330 ft. from SE lines of SW of Sec. 23, H.&T.C. Sur., Blk. 5 ..... Rig up.

WINKLER COUNTY

Harry Adams et al's No. 3 Scarborough, 990 ft. from N line and 990 ft. from E line of Sec. 1, Blk. 77, P.S.L. Sur. ..... Swabbing and cleaning out; est. 50 bbls. day; T.D. 3,183 ft.
Richardson et al's No. 1-D Scarborough, 990 ft. from N line and 1,650 ft. from E line of Sec. 18, Blk. 74, P.S.L. Sur. ..... Rig up.
Richardson et al's No. 2 State, 102.5 ft. N and 330 ft. E from the NW cor. Sec. 1, Blk. 77, P.S.L. Sur. ..... Drlg. 1,870 ft.
Sinclair Prairie Oil Co.'s No. 3 W. F. Scarborough, 1,650 ft. from E line and 1,990 ft. from N line of Sec. 1, Blk. 17, P.S.L. Sur. ..... Location.
L. H. Wentz' No. 1 Daugherty, 330 ft. from N and 330 ft. W of Sec. 3, Blk. C-23, P.S.L. Sur. ..... Location.

Wildcat Operations in Texas Panhandle

Week Ending October 16

CARSON COUNTY

Company, well, farm name, section and block— Remarks:

Reiger et al's No. 1 Foster, 336 ft. from N and E lines of SW Sec. 93, Blk. 7, I.&G.N.R.R. Sur. ..... Drlg. 550 ft.

GRAY COUNTY

Anderson & Bean's No. 3 J. C. Vollmert, 330 ft. from S line, 330 ft. from E line, SW Sec. 140, I.&G.N. Sur., Blk. 3 ..... Cellar.
Cambrian Oil Co.'s No. 2 G. Cole, 330 ft. from S line, 330 ft. from W line, SW Sec. 105, I.&G.N. Sur., Blk. 3 ..... Fishing 2,805 ft.
Chism et al's No. 1 J. M. Carpenter, 330 ft. from N line, 330 ft. from E line of SE Sec. 37, H.&G.N. Sur., Blk. 25 ..... Pay 2,630-56 ft. and 2,685-90 ft.; est. 15 bbls.; T.D. 2,690 ft.
Denworth Oil Co.'s No. 2-B Webb, 330 ft. from N and W lines, SE NW Sec. 61, Blk. 25, H.&G.N. Sur. ..... Pay 2,570-98 ft.; shot with 145 qts.; 16 bbls. per hr.; T.D. 2,598 ft.
Gulf Prod. Co.'s No. 5 Ellis Cockrell, 330 ft. from N and E lines of S½ Sec. 2, Blk. M-21, T.C.R.R. Sur. ..... Location.
Henderson et al's No. 1 Husselby, 330 ft. S and E, SW SW Sec. 11, Blk. A-9, H.&G.N. Sur. ..... Rig.
Mazda-Shell's No. 4 Coombs-Worley, 990 ft. from N line, 330 ft. from E line, Sec. 35, Blk. 3, I.&G.N. Sur. Rig.
Phillips Pet. Co.'s No. 7 Jackson, 990 ft. from E, 330 ft. from S lines of S½ SE Sec. 88, Blk. 2-B, I.&G.N. Sur. ..... Drlg. 3,035 ft.
Phillips Pet. Co.'s No. 1 Benton, 360 ft. N, 345 ft. W from E lines of W½ E½ Sec. 63, Blk. 3, I.&G.N. R.R. Sur. ..... Drlg. 3,207 ft.
Baker Saulsberry's No. 1 John Cubine, 990 ft. from N and E lines, of SE Sec. 36, Blk. 25, H.&G.N.R.R. Sur. ..... Drlg. 1,810 ft.
Sinclair Prairie Oil Co.'s No. 2 P. A. Coomley, 1,800 ft. from S, 2,618 ft. from W lines of S 246 acres of Sec. 57, Blk. 3, I.&G.N. Sur. ..... Put on pump; T.D. 3,141 ft.
Skelly Oil Co.'s No. 5 Vicars, 440 ft. from N, 330 ft. from W line of E½ NW Sec. 127, Blk. 3, I.&G.N. R.R. Sur. ..... Shot with 180 qts. 3,206-80 ft.; swbng. 180 bbls.; T.D. 3,283 ft.
Southern Pet. Explin. Co.'s No. 5 McConnell, 330 ft. from N, 990 ft. from W lines of NW Sec. 174, Blk. 3, I.&G.N.R.R. Sur. ..... Drlg. 1,585 ft.
Sun Oil Co.'s No. 2-B Combs-Worley, 330 ft. from S line, 990 ft. from E line of SW of Sec. 34, I.&G. N. Sur., Blk. 3 ..... Drlg. 2,500 ft.
Vulcan Oil Co.'s No. 1 M. H. Kinard, 330 ft. from N line, 330 ft. from W line, SW Sec. 41, H.&G.N. Sur., Blk. 25 ..... Cellar.
F. H. Yealy's No. 2 Crank, 960 ft. from N and E lines of N 160 acres of W 400 acres of Sec. 163, Blk. 3, I.&G.N.R.R. Sur. ..... Fishing 1,100 ft.

HUTCHINSON COUNTY

Huber Pet. Corp.'s No. 1-A Huber Dunaway, 330 ft. from S, 990 ft. from E lines of S 200 acres of Sec. 7, Blk. Y-a, T.C.R.R. Sur. ..... Cellar.
Phillips Pet. Co.'s No. 1 Ponter, 33 ft. from S and W lines of S 80 acres of E½ Sec. 6, Blk. M-21, T.C. R.R. Sur. ..... Drlg. 2,710 ft.
Dave Rubin-Henderson's No. 1 fee, 86 ft. from S, 299 ft. from E of SW cor. Sec. 82, Blk. 46, H.&T.C. R.R. Sur. ..... Fishing 2,015 ft.

RANDALL COUNTY

Woolsey & Devore's No. 1 Belew, 330 ft. N, 1,320 ft. E of NE, Sec. 85, Blk. 2, A.B.&M. Sur. ..... S.D. 4,211 ft.

WHEELER COUNTY

Martin & Dubose's No. 1 Grogan, C NE Sec. 57, Blk. 23, H.&G.N. Sur. ..... Fishing 1,545 ft.

Kansas Voluntarily Below Allowable Production; Will Take New Potentials for Allocation

By JAMES McINTYRE

Potential tests will be made this week and until October 26 in Kansas fields to determine the allocation of production to conform to the 116,000-bbl. allowable set by the Federal oil administration. As soon as the tests have been completed in a pool it will be given its allowable for October. State Umpire Cooper in a letter to producers says:

The potential production tests shall be taken in the areas listed below:

Ritz-Garrett-Decker area—Beginning 7 a. m., October 19 and ending 7 a. m., October 20.
Johnson area—Beginning 7 a. m., October 19 and ending 7 a. m., October 20.
Voshell area—Beginning 7 a. m., October 23 and ending 7 a. m., October 24.
Nikkell area—Beginning 7 a. m., October 23 and ending 7 a. m., October 24.
Richardson area—Beginning 7 a. m., October 23 and ending 7 a. m., October 24.
Heiken area—Beginning 7 a. m., October 23 and ending 7 a. m., October 24.
Orth area—Beginning 7 a. m., October 23 and ending 7 a. m., October 24.
Breford area—Beginning 7 a. m., October 23 and ending 7 a. m., October 24.
Steckel area—Beginning 7 a. m., October 23 and ending 7 a. m., October 24.
Isern area—Beginning 7 a. m., October 23 and ending 7 a. m., October 24.
Sharpe area—Beginning 7 a. m., October 23 and ending 7 a. m., October 24.
Hollow area—Beginning 7 a. m., October 26 and ending 7 a. m., October 27.
Haury area—Beginning 7 a. m., October 26 and ending 7 a. m., October 27.
Burrton area—Beginning 7 a. m., October 26 and ending 7 a. m., October 27.
Cunningham area—Beginning 7 a. m., October 26 and ending 7 a. m., October 27.
Robbins area—Beginning 7 a. m., October 26 and ending 7 a. m., October 27.

The Stoltenberg Pool will be allowed 21.75 per cent of its potential; Chase townsite, 22.75 per cent; Greenwich, 63.74 per cent; Valley Center, 91.73 per cent; Ritz-Canton, 67.82 per cent; Voshell, 67.82 per cent, and Caldwell (State Line Pool), 61.97 per cent.

The potential tests must be taken by pumping or flowing, but as there are some wells in the State that are using gas lift an effort will be made to have these wells provided for in the orders as it would be very costly to put them on the pump.

The past week in the field did not develop anything out of the routine and the number of completions or near completions was below the average for the State.

Production by Pools

Following is the estimated daily average production of some of the more prominent pools and fields of Kansas in the week ending October 14, and in the preceding week:

	Oct. 14	Oct. 7
Hollow	6,210	8,902
Ritz-Canton	18,795	18,167
Voshell	5,950	6,096
Sedgwick County	9,260	9,670
Nikkell	2,420	2,001
Ellsworth County	4,073	4,353
Rice County	5,544	5,180
Barton County	436	470
Reno County	1,648	1,801
Ellis County	827	793
Kingman County	662	1,040
Stafford County	635	695
Russell	2,500	2,500
Greenwood County	11,400	11,400
Butler County	18,100	18,000
Other pools	23,810	24,957
Total Kansas	112,270	116,025

McPherson County

J. E. Mabee, Inc., and Shell Petroleum Corp.'s No. 3 Klassen, SW NW SE Section 33-21-3w, Nikkel Pool, McPherson County, pumped 785 bbls. in 14 hours from Hunton lime at 3,466-70 feet and was completed.

McBride, Inc., completed No. 1 Koehn, NE cor. Section 33-21-3w. After treating the second time with acid the well pumped 175 bbls. in 12 hours. It produces from Hunton lime at 3,431-44 feet.

The Texas Co.'s No. 3 Munn, NE SE NE Section 12-20-2w, was acidized and made 80 bbls. in 24 hours on the pump, producing from Viola lime at 3,398-3,408 feet. It was completed.

McPherson Oil & Gas Co. and Shell Petroleum Corp. completed No. 2 Fleming, C NW NW Section 11-19-2w, as a gasser. It tested 4,500,000 feet in 24 hours from chat at 2,950 feet. It was an old well deepened.

Lario Oil & Gas Co. and Shell Petroleum Corp.'s No. 2 Hill, NE cor. SE Section 23-19-2w, pumped 540 bbls. in 24 hours from Viola lime at 3,391-3,406 feet, which had been acidized. It was completed.

Same companies' No. 3 Suffield, NE SE Section 25-19-2w, an old well deepened, pumped 328 bbls. in 24 hours from Viola lime, total depth 3,424 feet.

Dickey Petroleum Co. and Shell Petroleum Corp.'s No. 4-B Decker, SE NW SE Section 35-19-2w, pumped 50 bbls. of oil and 15 bbls. of water in 24 hours from Viola lime at 3,391-3,404 feet, which had been acidized. It is a completion.

New work in McPherson County includes Slick, Pryor & Lockhart, Inc.'s No. 3 Stucky, CWL SW Section 27-20-3w, a rig; Sinclair Prairie Oil Co.'s No. 6 McCurdy, SE NE SE Section 33-20-3w, a rig; General Petroleum Co.'s No. 1 Middleswartz, NE cor. Section 9-18-2w, cleaning out to deepen from 1,680 feet; McPherson Oil & Gas Co.'s No. 1 Lindberg, C NE Section 15-19-2w, rigged up to deepen from 2,952 feet; Gypsy Oil Co.'s No. 3 Lovett, NW cor. Section 24-19-2w, rigging up rotary; Rice Oil Co. and Shell Petroleum Corp.'s No. 1 Wiles, NE NW NE Section 25-19-2w, rigged up; Phillips Petroleum Co.'s No. 1 Grattan, SW SE SE Section 19-19-1w, a location.

Reno County

Duston & Hopper and others are rigging up rotary for No. 1 Evans, C NE NW Section 25-24-8w, Reno County. Roth & Faurot are rigging up rotary for No. 1 Yoder, C NW NW Section 15-24-5w.

Mylius and others' No. 1 Patton, SE cor. NE Section 35-23-5w, a wildcat, was drilling at 3,885 feet with 400 feet of water in the hole and a little oil showing. Wilcox sand was topped at 3,857 feet.

Gypsy Oil Co. was drilling at 2,068 feet in No. 2 Krehbiel, C SE NE Section 35-23-4w, and Olson & Shell were rigging up standard tools to finish No. 4 Gorwin, C NW SE Section 35-23-4w. Hollow and others were drilling at 2,395 feet in No. 1 Bartel, SW cor. Section 36-22-4w.

Harvey County

Sinclair Prairie Oil Co.'s No. 2-B Neufeldt, SE NE NE NE Section 18-22-3w, Hollow Pool, Harvey County, got Wilcox sand at 3,553 feet and drilled in 9 feet. The well swabbed 270 bbls. in 15 hours.

Producers & Refiners Corp. put No. 3 Martens, SE SW SE Section 19-22-3w, on the pump and it made 411 bbls. in 12 hours. It is an old Wilcox sand well drilled deeper to 3,536 feet.

Same company's No. 6 Martens, NW SW SE Section 19-22-3w, pumped 40 bbls. per hour from Hunton lime at 3,345-70 feet.

Sinclair Prairie Oil Co.'s No. 4 Ediger, SE cor. SW Section 19-22-3w, swabbed 40 bbls. per hour from Hunton lime at 2,322-61 feet. It will be acidized.

Shell Petroleum Corp. has cellar completed for No. 2 Voth, NE NW Section 4-22-3w. J. E. Mabee, Inc., and Shell Petroleum Corp. have rigs up for No. 1-A Nikkell, SW cor. Section 8-22-3w, and No. 2-A Nikkell, SW SE SW Section 8. Phillips Petroleum Co. was rigging up to deepen to Hunton lime No. 2 Workentine, NW SW SW Section 20-22-3w. Harris & Haun's and Phillips Petroleum Co.'s No. 1 Cone, C NW Section 31-22-3w, was spudded.

Kingman County

In the Cunningham area in Kingman County Skelly Oil Co.'s No. 1 Interurban Realty Co., CNL SW Section 19-27-10w, flowed 235 bbls. naturally from Lansing lime at 3,410-14 feet. It will be acidized Same company has moved in rotary for No. 2 Ratcliff, CSL NW Section 30-27-10w, and had a fishing job on No. 2 North Miles, CNL SW CWL SE Section 19-27-10w, total depth 2,310 feet.

Sedgwick County

Wentz and others were rigging up standard tools to drill No. 1 Stockamr, SW cor. NE Section 31-26-2w, a Sedgwick County wildcat. Plains Petroleum Co. were rigged up on No. 1-A Southwestern College, NE SE SW Section 2-27-1w. Derby Oil Co. will plug back No. 4 Gorman, NW SW NW SW Section 6-26-1e, now at 3,367 feet. It will be tested in Kansas City lime. On the other hand Marylin Oil Co. will drill deeper in No. 1 Richards, SW NW NE SW Section 6-26-1e, now at 3,389 feet. Continental Oil Co. plugged back No. 8 Shawver, NW SW NW Section 7-26-1e, from 3,370 feet to 2,597 feet. Eight-inch casing was set at 2,545 feet. Pyle & Sutter plugged back No. 2 Caldwell, NE NW SE SW Section 6-26-1e, from 3,378 feet. Top of the Kansas City lime was found at 2,575 feet, new total depth 2,738 feet. It swabbed oil and water and the hole was being cleaned out.

Vickers Petroleum Corp. and others' No. 3 Keys, SW NW NE Section 30-27-2e, was a hole full of water at 3,325-34 feet and will be plugged back.

Butler and Cowley Counties

M. B. Armer's No. 1 Winfield Investment Co., SE SW SE Section 22-32-4, in the Winfield area, Cowley County, was treated with acid and pumped nothing but water. It had been deepened from 3,301 feet to 3,329 feet.

Lewis Production Co. has rig up for No. 1 Coles, SW NE SE Section 36-31-5, Cowley County.

F. G. Hall and others spudded their No. 1-B Graves, C W half W half NW Section 17-29-4, Butler County.

Blakely & Wentz' No. 1 Beadles, NW SW NE SE Section 5-27-6, Butler County, will be deepened from 2,850 feet.

Hartman Oil Co. and others' No. 1 McCann, SE SW NW Section 7-25-3, a wildcat was re-treated with acid and pumped 40 bbls. of oil and some water in 24 hours.

Greenwood County

Mendenhall's No. 2 Hollister, SW SE SE Section 5-25-13, Greenwood County, had sand at 1,491-1,539 feet and fluid rose in the hole 900 feet.

Rex and others' No. 5 Nesbitt, SE NE NW Section 6-24-12, was a failure.

(Continued on Page 46)

Wildcat Operations in Kansas

Week Ending October 14

(Descriptions are East unless marked otherwise)

Company, farm and location—	Remarks.
BARTON COUNTY	
Atlantic O. P. Co.'s No. 1 Schneider, C NE SW Sec. 15-20-13w	Drlg. 2,013 ft.
Helmerich & Payne's No. 1 Everleigh, C SW SE Sec. 13-18-13w	T.D. 2,490 ft.; fishing.
Skelton et al's No. 1 Ott, C SE SE Sec. 16-19-14w	O.W.D.D.; T.D. 3,706 ft.. P.B. to 3,255 ft.
BUTLER COUNTY	
Hartman et al's No. 1 McCann, SE SW NW Sec. 7-25-3	Re-acidized; pumped 40 bbls. oil and some wtr. in 24 hrs.
COWLEY COUNTY	
Yarnell et al's No. 1-A Speer, SE NE NE Sec. 31-33-6e	Drlg. 1,890 ft.
Van Meter et al's No. 1 Moore, NE cor. Sec. 5-33-4	Rig on ground.
EDWARDS COUNTY	
Atlantic Oil Prod. Co.'s No. 1 Bradbridge, C SE NW Sec. 1-24-16w	Drlg. 3,514 ft.
FINNEY COUNTY	
National Ref. Co. et al's No. 1 Smith, C SE SW Sec. 2-23-29w	Drlg. 1,770 ft.
HARVEY COUNTY	
Holbart Oil Co.'s No. 1 Harder, SE SW SE Sec. 11-23-1e	Drlg. 2,635 ft.
L. H. Wentz' No. 1 Bestvater, SW SE SW Sec. 8-22-1e	T.D. 2,975 ft.; C.O.
KINGMAN COUNTY	
D. R. Lauck et al's No. 1 Church, SE SW NE Sec. 10-28-6w	Dry and abd. 4,296 ft.
Olson and Skelly Oil Co.'s No. 1 Emery, C SW NW Sec. 22-25-6w	Drlg. 3,455 ft.
Regina O. & G. Co. et al's No. 1 Wilson, NW NE Sec. 26-25-5w	Drlg. 3,466 ft.
MARION COUNTY	
Holbart Oil Co.-Shell Pet. Corp.'s No. 1 Gingras, NE SW Section 8-24-1e	Drlg. 2,392 ft.
McPHERSON COUNTY	
Dieter et al's No. 1 Carlson, SE cor. Sec. 4-19-3w	O.W.D.D.; drlg. 2,925 ft.
Regina O. & G. Co.'s No. 1 Vogts, C SE SE Sec. 8-20-1w	Drlg. 3,046 ft.
Jim Madison's No. 1 Boesker, SE NW Sec. 29-20-1w	Spudded.
Paramount Oil Co.'s No. 1 Steinkirchner, NE SE SE Sec. 25-19-1w	T.D. 2,525 ft.; U.R. 8-in. pipe.
RENO COUNTY	
Mylius et al's No. 1 Patton, SE NE Sec. 35-23-5w	Drlg. 3,885 ft.
Roth & Faurot's No. 1 Yoder, C NW NW Sec. 15-24-5w	Rigging up rotary.
RICE COUNTY	
Atlantic Oil Prod. Co.'s No. 1 Brandenstein, C SE SE Sec. 10-19-10w	Drlg. 430 ft.
El Dorado Ref. Co.'s No. 1 Wernet, SW NE Sec. 12-20-6w	Spudding.
Elmer Corn et al's No. 1 Hunter, NE cor. Sec. 35-19-7w	Rig on ground.
Garden et al's No. 1 Thodel, C NW NW Sec. 11-21-7w	Comp.; pumped 250 bbls. in 24 hrs.
RUSSELL COUNTY	
Western Exploration Co.'s No. 12 Durr, SW cor. Sec. 30-15-12w	Rigging up.
SEDGWICK COUNTY	
Wentz et al's No. 1 Stockamr, SW NE Sec. 31-26-2w	Rigging up.
STAFFORD COUNTY	
Atlantic Oil Prod. Co.'s No. 1 Willinger, C NE NE Sec. 18-22-11w	Spudding.

Careful Operating Delays Completion of Second Crescent Pool Well; State Production Up

By JAMES McINTYRE

The Crescent Pool in Logan County is the most interesting spot in Oklahoma for oil men at this time. The Gypsy Oil Co. and Carter Oil Co.'s jointly owned No. 1 Walker in Section 28-17-4w, a half mile south of the same company's discovery well, was not completed up to the writing of this review. Thus far the well has not shown nearly as well as the discovery well which produced 5,700 bbls. in a one-day test before it was shut in, but it is believed the Walker test will be better than a 2,000-bbl. producer when completed. Neither well was drilled into the sand. They were cored in and the production thus far has come from the 6-inch core holes. Between the two wells is a test of the Continental Oil Co. which ought to make a big producer. In the same section the Sinclair Prairie Oil Co. is reported to have obtained a saturated core in the last coring test on the Shaeffer farm.

G. G. Frazier, who has been in Oklahoma City since August enforcing "hot oil" rules, was notified of his appointment to enforce the Federal oil code in Oklahoma, but had not received detailed information concerning his appointment.

Leasing in Oklahoma City

The east side of Oklahoma City has been overrun by leasers in the past week. The well of Frank Russell, Inc., near the State Capitol, which came in as a producer, has developed a leasing play which covers over 2,500 acres thus far. The prospective buyers have even invaded the exclusive Lincoln Terrace residential section near the Capitol Building but no deals in that part of the city have been reported. Most of the property thus far leased is owned by homesteaders and extends from the eastern city limits to the Santa Fe Railroad tracks. Much of the bonus was paid in cash. Most of the buyers are individuals.

It is worthy of note that one of the oldest oil producing districts in the State is now one of the most active areas in Oklahoma. The northern half of Creek County, the home of the Glenn Pool and the Cushing-Shamrock Pool, is dotted with tests and even the territory covered by the two old pools named is included in the development work. This field of operations is over 25 years old as an oil region, and thousands of wells have been drilled in it in the past quarter of a century. Just now the play is principally for shallow sand production, but recent operations have included Wilcox sand and Pure sand tests.

Production by Pools

Estimated daily average production in Oklahoma in the week ending October 14, and in the preceding week follows:

	Oct. 14	Oct. 7
Allen	10,085	10,500
Bowlegs	11,205	12,210
Bristow-Slick	11,100	11,150
Healdton	9,900	10,000
Burbank	9,400	9,609
Lucien	9,445	9,270
Carr City	6,995	6,590
Cromwell	4,950	5,000
Earlsboro	10,870	11,410
East Earlsboro	15,165	16,300
South Earlsboro	1,700	1,610
Little River	17,145	17,400
East Little River	960	859
Oklahoma City	130,110	142,475
Seminole City	11,325	12,800
East Seminole	1,565	1,615
Searight	2,710	3,000
Maud	1,640	1,450
Mission	4,870	5,340
Cushing-Shamrock	13,300	13,000
St. Louis-Pearson	26,630	30,190
Tatums-Tussey	7,750	8,350
Sholem-Alechem	5,350	5,350
Other pools	133,070	133,410
Total Oklahoma	507,240	478,780

Numerous tests have been drilled in Oklahoma County to find "another Oklahoma City field" but thus far without avail. The Mid-Kansas Oil & Gas Co.'s test, in the SW cor. Section 32-14-3w, which came in with an initial production of 390 bbls. and was shut in, prompted the drilling of other tests in that end of the county. H. E. Rapp's No. 1 Price, C E half NE SW Section 19-14-3w, at a total depth of 6,708 feet ran 6,000 feet of tubing to make a flowing test. A few small heads were made, but the pressure dropped from 1,750 to 1,100 pounds. It was then shut in but on being reopened the following day the well would not flow. Another test in the same neighborhood, W. E. Huston and others' No. 1 Ketchum, C W half NE SE Section 32-14-3w, was drilled to 6,853 feet. The top of the Wilcox sand was found at 6,765 feet. A core was taken at 6,767-70 feet and at 6,775-78 feet, the latter a white salty sand. A third core was taken at 6,816-27 feet, a white sand. In the lower levels water was encountered and the hole was plugged back to 6,748 feet and the crew was waiting for cement to set.

Frank Russell's well northeast of the State Capitol Building, No. 1 Highley, SW NW SE Section 23-12-3w, flowed 354 bbls. of oil in 14 hours, total depth 6,659 feet. This well is 2 miles north of the Oklahoma City Field, being in the northern part of the city. Russell is having a controversy with the city of Oklahoma City over the drilling of wells. He has made three locations on town lots in the neighborhood of his oil well. Blocks 8, 9, and 11, Fairfax Addition, in the E half SW Section 23-12-3w. Whether or not these will be drilled depends upon a court decision on an injunction.

Two wells were completed in the field proper, both by the Indian Territory Illuminating Oil Co. That company's No. 2 South Glendale, SW NW NW Section 26-11-3w, flowed 1,625 bbls. in two and one-half hours, producing gas at the rate of 30,000,000 feet per day, from sand at 6,472-6,607 feet, and its No. 2 Wickline, SE SW NW, producing 1,162 bbls. in two hours, with gas at the rate of 6,000,000 feet per day. Wilcox sand was topped at 6,513 feet, total depth 6,633 feet.

Beverly Hills Oil & Gas Co.'s No. 1 Chester Davis, NE cor. NW Section 27-11-3w, flowed 630 bbls. in four and one-half hours from Wilcox sand at 6,560-6,607 feet. It also showed gas at the rate of 7,000,000 feet per day.

Indian Territory Illuminating Oil Co. was building rig for No. 2 Jarvis, NW SE NW Section 26-11-3w; for No. 3 South Glendale, SE NW NW Section 26-11-3w, and for No. 4 Wickline, NE SW NW Section 26-11-3w, and has rig up for No. 2 Wisel, NE SW SE Section 26-11-3w. Phillips Petroleum Co. has rigs up for No. 5 Berg, SW NE SW Section 26-11-3w, and for No. 6 Berg, SE NW SW Section 26-11-3w.

Okfuskee County

Mid-Continent Petroleum Corp.'s No. 1-B Fields, SE NE Section 2-11-11, Okfuskee County, had Wilcox sand at 3,719-32 feet. The well swabbed and flowed 265 bbls. in 12 hours. It will be deepened. In the same township, L. Steckoll was drilling at 1,200 feet in No. 2-A Likowski, NW SW NE SW Section 23-11-11, and Minnehoma Oil Co. was deepening 3,047 feet in No. 2 Grayson, NW SE Section 31-11-11; old total depth was 3,042 feet.

In Greater Seminole District

Carter Oil Co.'s No. 1 Riddle, C S half SE SE Section 35-11-6, Keokuk Falls district, Seminole County, flowed 123 bbls. in 24 hours from Hunton lime at 4,083-98 feet. It will be acidized.

Carter Oil Co. and others' No. 1 Renton, C N half NE NW Section 2-10-6, Keokuk Falls district, flowed 794 bbls. in 24 hours and again 741 bbls. in 24 hours, from Misener sand.

Marydon and others' No. 1 Brandenburg, SE NE SE Section 34-8-4, west of the Maud Field, Pottawatomie County, was abandoned at 4,000 feet. It was acidized, but it did not develop any production in addition to a 20-bbl. showing at 3,830 feet.

Rapp, Reynolds & Stephenson's No. 1-A Burden, 330 feet south and 170 feet east of C Section 23-8-6, east of the Little River Pool, Seminole County, was a hole full of water at 3,062-87 feet and was abandoned.

Turman Oil Co. and others' No. 1 Ward, SE cor. NW Section 33-7-4, South St. Louis area, flowed 1,200 bbls. from dolomite pay at 4,200-03 feet and was completed.

Mid-Continent Petroleum Corp.'s No. 2 Vieux, SE SW SE Section 31-7-5, swabbed 80 bbls. of oil in 18 hours from Simpson at 4,060-70 feet and will be acidized.

Kent & Preston's No. 1 Petete, SE NE SW SW Section 22-7-8, West Holdenville Pool, had sand at 1,163-67 feet

Wildcat Operations in Oklahoma

Week Ending October 14

Northern Oklahoma

ALFALFA COUNTY

Company, farm and location— Remarks:

Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w.....S.D. 6,048 ft.

BECKHAM COUNTY

Mid-Texas' No. 1 Sidell, SE SW SW Sec. 17-9-22w.....Showing of gas 2,740 ft.
Pattee Royalty Co.'s No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w .....T.D. 3,965 ft.

COAL COUNTY

Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-8 .....S.D. 2,750 ft.

GARFIELD COUNTY

J. H. Lewis' No. 1 Clark, C NW NW Sec. 34-21-4w .....Drlg. 5,006 ft.

GREER COUNTY

Otis Cosgrove's No. 1 order, C S½ NE NW Sec. 31-6-22w.Machine.

HUGHES COUNTY

Dixie-Lee Oil Co.'s No. 1 Taylor, C NW Sec. 37-5-10.... Drlg. 350 ft.
Scruggs et al's No. 1 Black, NE Sec. 13-9-10 .....Drlg. 460 ft.

KAY COUNTY

Morgan et al's No. 1 Bush, NW NE NE Sec. 25-28-4....S.D. 2,695 ft. for pipe.
Burton Lewright et al's No. 1 Leseman, SW NE SE Sec. 4-25-2 .....Rig.

KIOWA COUNTY

Christian's No. 1 Jones, NE NW Sec. 8-7-18w .....Drlg. on iron at 1,856 ft.

LINCOLN COUNTY

Amerada Pet. and Stanolind O. & G. Co.'s No. 1 Martinek, NW SE Sec. 35-13-5e .....Drlg. 2,600 ft.
Amerada Pet. Co.'s No. 1 Long, C NW NW SW Sec. 12-13-6 .....H.F.W. 4,272-77 ft.; Wilcox sand.

MARSHALL COUNTY

Robb et al's No. 1 Vittitoe, NE SE Sec. 11-5s-4e.....S.D. 3,315 ft. for fuel.

MURRAY COUNTY

A. E. Harden's No. 1 Sadler, NE Sec. 19-1-3.....Rig.
T. E. Revells et al's No. 1 Wolfe, NE cor. Sec. 18-1-2...Drlg. 400 ft.

MUSKOGEE COUNTY

J. S. Routt et al's No. 1 Escoe, CWL SE NE Sec. 17-13-17 T.D. 1,200 ft.; S.D. for 10-in. csg.

OKLAHOMA COUNTY

Houston et al's No. 1 Ketcham, CSL NW NE SE Sec. 32-14-3w .....Drlg. 6,827 ft.
Mid-Continental Oil Co.'s No. 1 Edwards, C SE SE Sec. 19-11-1 .....S.G. 3,160-80 ft.; S.D. 3,341 ft.
H. E. Rapp's No. 1 Price, CEL NE SW Sec. 19-14-3w....Ran 6,600 ft. of 2-in. tubing; to swab.
F. Russell's No. 1 Heapley, SW NW NE Sec. 23-12-3w..Wilcox sand 6,649-59 ft.; 373 bbls. in 24 hrs.; rigging up standard tools.

PAYNE COUNTY

O. N. Maines et al's No. 1 Scheidberg, NW SW NW Sec. 27-22-6 .....Wilcox sand 3,114-38 ft; wtr.; S.D.

PITTSBURG COUNTY

Moffett & Hall's No. 1 Jones, C NE NW Sec. 14-3-14 ..Broken sand 3,100-3,200 ft.; fishing for tools.

PONTOTOC COUNTY

Galbreath's No. 1 Stafford, NE SE SE Sec. 31-3-5.....S.D. 780 ft.
Choctaw O. & G. Co.'s No. 1 Thompson, SW NE SW Sec. 1-1-7 .....Drlg. 1,680 ft.
W. E. McGraw's No. 1 Mayhue, NE Sec. 19-2-6.....S.D. 1,200 ft.
McGee et al's No. 1 Newborn, SW NE Sec. 21-5-4..... Rig.
Williams' No. 1 Kroth, NE SE Sec. 33-3-4..... H.F.W. 1,977 ft.
Wirrick's No. 1 fee, SE SW Sec. 29-2-7 .....Acidized; flowed 550 bbls. in 24 hrs.; S.D. for tankage.

POTTAWATOMIE COUNTY

Atlantic Oil Prod. Co.'s No. 1 School land, C NE NW NW Sec. 36-10-4 .....Drlg. 840 ft.
Conley Drlg. Co.'s No. 1 Vinson, NE cor. Sec. 13-7-4e....Drlg. 2,794 ft.
Payne Drlg. Co.'s No. 1 Lovelace, NW SW NW Sec. 27-6-4. T.D. 3,780 ft.; csg. collapsed.
Vivian Oil Co.'s No. 1 Kanster, SE SW Sec. 18-7-4.....Drlg. 3,413 ft.

SEMINOLE COUNTY

Huffman Drlg. Co.'s No. 1 Scott, NW cor. SE .....S.D. 1,030 ft.
Stewart & Egan's No. 1 Sanderson, NE SW Sec. 27-6-5..H.F.W. 3,740 ft.; P.B. to 3,724 ft.

WASHITA COUNTY

McWhirter & Bost's No. 1 Hall, SW SE SE Sec. 28-8-19w Drlg. 180 ft.

Southern Oklahoma

ATOKA COUNTY

J. D. Boukan's No. 1 Howard, NW SW NW Sec. 20-2s-10e. S.D. for pipe 682 ft.
Blake's No. 1 Galbreath, SW NE SE Sec. 5-1-15 .....Drlg. 248 ft.
Malernee et al's No. 1 Cole, NE NW Sec. 19-2s-14.....Drlg. 638 ft.

JEFFERSON COUNTY

Wakefield's No. 1 Kelly, NW SE Sec. 1-5s-8w..... Drlg. 550 ft.

STEPHENS COUNTY

J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w. Drlg. 1,000 ft.
Navajo Oil Co.'s No. 1 Miller, NW cor. NE Sec. 13-1n-6w. Drlg. 30 ft.

TILLMAN COUNTY

J. H. Everett's No. 1 Crane, SW cor. Sec. 15-3s-14w... Rig.

MAJOR COUNTY

Paul R. Robb's No. 1 Vittitoe, C NE SE Sec. 11-5-4.... S.D. 3,500 ft.

and the hole filled 300 feet with oil. It was shut down for tankage.

E. W. Jones and others' No. 1 Lucas, NW NE NW Section 2-6-4, Asher district, Pottawatomie County, swabbed 1,040 bbls. in 24 hours after a second acid treatment at 4,085-4,125 feet. It took a 48-hour potential gauge and swabbed 1,742 bbls. It is a completion.

Stanolind Oil & Gas Co., Amerada Petroleum Corp. and Indian Territory Illuminating Oil Co.'s No. 1 Hubert, NE cor. Section 35-6-7, Sasakwa townsite, Seminole County, swabbed and flowed 819 bbls. in 24 hours from Wilcox sand at 4,044-57 feet.

Huffman Brothers have abandoned their test, No. 1 Scott, NW cor. SE Section 23-6-8, at 1,030 feet.

Denver Producing & Refining Co.'s No. 1 Standridge, SE NW SE Section 25-5-4, Pontotoc County, is a 90-bbl. pumper, producing from Viola lime at 2,428-83 feet.

Sledge and others' No. 1 Wooley, SW SE SW Section 22-2-7, was completed It made 15,000,000 feet of gas in 24 hours.

New work started in Greater Seminole and in Pontotoc County included Carter Oil Co.'s No. 7 F. Chowning, C SW NW SW Section 19-9-6, rigging up; Keyokla Petroleum Co.'s No. 1 McGee, SE SW SE Section 4-7-4, rigging up; Sinclair Prairie Oil Co.'s No. 2 Meyers, SE cor. Section 32-7-4, drilling at 1,570 feet; Hall & Briscoe's No. 3 Brown, SE SW NW, Section 35-7-4, rig; Turman Oil Co. and others' No. 2 Ward' SW SE NW Section 33-7-4, cellar dug; Mannhan's No. 3 Chapman, CEL W half SE SW Section 10-7-8, rig; Burke-Greis Oil Co.'s No. 2 Davis, C SE SW SW Section 20-7-8, location; Winona Oil Co. and Jarvis & Holm's No. 2 Campbell, CEL NE SW SW Section 20-7-8, location; Brydia Oil Co.'s No. 1-A Burke-A. SW NW SE Section 32-5-5, a rig.

In the Lucien Pool

In the Lucien Pool, in southwestern Noble County, Lucien Consolidated's No. 1 Magney (being drilled by the Shell Petroleum Corp.), C SW SW Section 17-20-2w, produced 1,000 bbls. in 24 hours from 5,187 to 5,260 feet.

Lucien Consolidated's No. 1 L. Miller, C SE SE Section 18-20-2w, was good for 4,005 bbls. in 24 hours from Wilcox sand at 5,205-68 feet. Top of the first Wilcox was found at 5,038 feet and top of the second Wilcox at 5,125 feet, with the big play from 5,205 feet to the total depth. The Miller farm well is a west offset to the smaller Magney farm well.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 D. L. Kolb, C NW NW Section 33-20-2w, which is outside the Lucien Consolidated block of acreage, got dolomite at 5,028 feet; first sand at 5,089-5,130 feet, from which it swabbed 106 bbls. in six hours; second sand at 5,175-80 feet, from which it had recovered two bailers of water per hour. It was plugged back to first sand but not yet tested.

Stanolind Oil & Gas Co. and Continental Oil Co.'s No. 1 Boley, C SW SW Section 16-20-2w, half mile northeast of discovery well, found a lot of water in the Oswego lime at 4,780 feet. First Wilcox sand was found at 5,225-62 feet.

Lucien Conosildated Oil Corp. was rigging up No. 1 Moelling, C SW SE Section 17-20-2w, which was the only new work started in the pool in the past week

Payne County

Amerada Petroleum Corp. and Stanolind Oil & Gas Co.'s No. 1 Bryant, NW SE SE Section 6-18-5, Payne County, had a small flow of oil from second Wilcox sand at 3,640-86 feet. There also was 3,000,000 feet of gas. It was shut down for tankage.

Logan County

The next well to show results in the Crescent Pool in Logan County should be the Continental Oil Co.'s No. 1 McConnell, C SE SE Section 28-17-4w, a south offset to the discovery well and a north offset to the Gypsy Oil Co. and Carter Oil Co.'s good well on the Walker farm. It found the top of the Hunton lime at 5,824 feet and was drilling at 5,938 feet.

The Sinclair Prairie Oil Co.'s No. 1 J. W. Shaffer, NE SW Section 28-17-4w, about a half mile west of the discovery well, had Mississippi lime at 5,990 feet; top of the Viola lime at 6,224 feet and was drilling at 6,360 feet. The discovery well had no Mississippi lime, and the Gypsy-Carter's No. 1 Walker had Viola lime at 5,925 feet, or 299 feet higher than the Sinclair company's No. 1 Shaffer. The Sinclair Prairie Oil Co.'s No. 1 Phillips, NE NW Section 28-17-4w, half mile north and then half a mile west of the discovery well, had Layton sand at 4,975-5,001 feet and was drilling at 5,938 feet.

Gypsy Oil Co. and Carter Oil Co.'s No. 1 Walker, C NE NE Section 33-17-4w, cored from 6,098 to 6,114 feet and was thought to be through the first Wilcox sand. It flowed 2,005 bbls. in 24 hours, with 6,000,000 feet of gas.

Creek County

Roy Dean and others' No. 1-A Grayson, SE NW Section 3-18-8, Mannford district, Creek County, was shot with 120 quarts at 2,568-2,600 feet and swabbed 50 bbls. in 24 hours.

L. B. Jackson's No. 6 Wills, CSL SW NW Section 26-18-8, was shot in Layton sand at 1,290-1,329 feet and made a 15-bbl. showing. It was being cleaned out.

F. O. Akin and others' No. 1 Howard, NE NW SE Section 34-18-8, got Layton sand at 1,240-73 feet. The well made 75 bbls. in 24 hours after a shot.

Doss and others' No. 1 Tiger, SE NW NE Section 34-18-8, produced 200 bbls. initially after a shot of 135 quarts.

F. O. Akins' No. 1 Harry, NW SE SW Section 35-18-8, swabbed 60 bbls. in 24 hours, following a shot in Layton sand at 1,557-82 feet.

Shamblin and others' No. 1-A Freeman, NW SE SW Section 14-17-8, made a 10-bbl. showing after a shot in Peru sand at 2,302-25 feet and was being plugged back to Layton sand at 1,380-1,406 feet.

Bingham Brothers' No. 1-A Thompson, SW NW NE Section 36-17-11, made 170 bbls. from Dutcher sand at 2,233-40 feet.

Banks & Page's No. 2 J. Beams, NW cor. Section 31-17-12, had Wilcox sand at 2,643-52 feet. The hole filled with water and the well was abandoned.

New work in Creek County included J. E. Crosbie, Inc.'s No. 7 Escoe, CNL NW SW Section 26-18-8, drilling at 450 feet; L. B. Jackson's No. 7 Wills, CWL SW NW Section 26-18-8, drilling at 150 feet; McEwen & Ice's No. 1 Elle, SE NE SE Section 33-18-8, machine; F. O. Akin and others' No. 2 Howard, NW cor. SE Section 34-18-8, drilling at 350 feet; Bay State Oil Co.'s No. 2 Crabtree, SE NE SW Section 34-18-8, rigging up; Doke & Hughes' No. 1 Rentie, NW SW SE Section 34-18-8, rigging up; B. G. Goble's No. 1 Smith, CSL SE SE Section 34-18-8, machine; Kilgore and others' No. 2 Tiger, NW SW NE Section 34-18-8, drilling at 150 feet; F. L. Marrs' No. 3 Tiger, CNL NE NE Section 34-18-8, drilling at 350 feet; Todd & Willoughby's No. 2, SE cor. NW Section 34-18-8, machine; Texas Co.'s No. 1 Karry, NW cor. SW Section 35-18-8, drilling at 160 feet; Swift & Woods' No. 2 Bell, NE SE Section 6-18-10, drilling at 400 feet; Henry and others' No. 1 Taylor, NW SW Section 2-17-8, drilling at 310 feet; C. T. Titus' No. 1-A Tiger, NW SE SE Section 3-17-8, location; Henry and others' No. 1-A Watson, NW cor. Section 11-17-8, machine; E. A. Smith and others' No. 4 Freeman, SE NE SW Section 14-17-8 (a twin), rigging up; Curtis Oil Co.'s No. 1 Unallotted, SE SW NE Section 4-17-10, building rig; Sherry & Murta's No. 4 Grayson, C NW SW NE Section 36-17-11, machine.

Tulsa and Wagoner Counties

Barth, Webb and others' No. 2 McIntosh, SE cor. Section 22-18-15, was shot in sand at 1,061-68 feet and had 150 feet of oil in the hole. The crew was fishing for casing. In the same district, Sheridan Oil Co. was spudding No. 5 Snake, CEL SE NW Section 26-18-15, and J. E. Martin was drilling at 788 feet in No. 4 Kelly, CSL SE NW Section 35-18-15.

J. E. Martin's No. 1 Posey, SE SW NW Section 35-18-15, was dry and abandoned at 1,089 feet.

H. E. Rothrock has machine in for No. 1 Billy, C NE SW Section 36-17-14, Leonard district.

G. E. Cahill's No. 1 Atkins, NW SW NE Section 2-17-15, Coweta district, was dry and abandoned at 1,057 feet. Same operator's No. 2 Tiger, NE NW SW Section 2-17-15, was drilling at 500 feet and McIntire and others were drilling at 150 feet in No. 4 E. Tiger, NE cor. NW Section 2-17-15.

Bonnell and others' No. 1 McIntosh, NE SW SW Section 19-17-15, was dry and abandoned at 1,186 feet.

Okmulgee and Muskogee Counties

Mack Drilling Co.'s No. 1-A Franklin, CWL NE SE Section 31-15-14, Okmulgee County, was a hole full of water from Wilcox sand at 2,269-80 feet and was abandoned.

A. J. Crist had started drilling No. 1-A Berryhill, SW NW NE Section 17-14-13.

Osage Activity

Field work in Osage County was unusually active in the past week. Sinclair Prairie Oil Co. made a location for No. 1, NE cor. SW, Section 10-25-6; J. E. Morrison, a location for No. 1, SE cor., Section 35-25-11; Producers & Refiners Corp. was drilling at 950 feet on No. 2, NW cor. SW, Section 15-24-7, and had rig up for No. 2, NW SW NW, Section 15-24-7; Champlin Refining Co. spudded in No. 2, NW NE SE, Section 16-24-7; Kashiske and the Peters Petroleum Corp. were drilling at 310 feet on No. 2, NE SE NE, Section 16-24-7, and were rigging up No. 3, SW SE NE, Section 16; Continental Oil Co. had spudded No. 2, SE cor., Section 21-24-7; Galt Brown's No. 2, SW NE SW NE, Section 30-24-8, was being cleaned out preparatory to drilling deeper from 2,740 feet; Bay Oil Co. was rigging up No. 1, NW cor. NE, Section 13-23-7; H. H. Markey has machine in for No. 14, SE NE SW SE, Section 25-23-8.

Only one completion was reported from Osage County, Norbla Oil Co.'s No. 1, NE cor. NW, Section 1-20-11, which was a hole full of water from Siliceous lime at 2,340-49 feet, total depth.

Lincoln County

Magnolia Petroleum Co. has a rig up for No. 3 Benedict, SW SE NW, Section 7-14-4, Chandler district, Lincoln County, and a rig up for No. 1 Green, NE cor., Section 18-14-4, and has made a location for No. 2 Wagner, NW NE NE, Section 18-14-4.

Amerada Petroleum Corp.'s No. 1 Long, C NW NW SW, Section 12-13-6, a wildcat in Lincoln County, had a hole full of water from Wilcox sand at 4,262-77 feet and was ripping pipe

Atlantic Oil Producing Co. and others were drilling at 840 feet in a wildcat on school land, C NE NW NW, Section 36-10-4, Lincoln County.

Southern Fields

Bridwell Oil Co.'s No. 1 O. W. Seay, SW SE NW, Section 4-7-5w, Jefferson County, was dry and abandoned at 2,180 feet.

Paul R. Robb, who set out to drill a deep test in Marshall County, has drilled his well, No. 1 Vittitoe, C NE SE, Section 11-5s-4e, to the contract depth of 3,500 feet and shut down.

George Pace has a 2,000,000-foot gas well in No. 1-A Bristow, NE SE NE NE, Section 29-2s-7w, at 1,182-86 feet and is rigged up on No. 2, a twin, on the same location.

Skelly Oil Co.'s No. 3 Pierce, SW NE SW, Section 8-2s-2w, Carter County, is estimated as a 20-bbl. well as it stands. The crew was running 1,315 feet of 6-inch liner. Total depth is 2,800 feet.

Carter Oil Co.'s No. 1 Gideon Gray, which was expected to connect the Tussey and Tatums Pools in Carter County, was dry and abandoned at 2,100 feet. It had a small showing of oil. The test was located in the C SE SE NE, Section 10-1s-3w.

Mudge Oil Co. completed its No. 2 Majors, C NE NW SE, Section 25-1s-3w, Tatums Field, which swabbed 810 bbls. the first 24 hours.

Southern Oil Co. has rigged up rotary to drill No. 1 Seay, NW SW NW NE, Section 3-7s-5w, Jefferson County. Roy Kyle's No. 2 Lester, SE NE NW SE, Section 4-2s-8w, was drilling at 100 feet. Pace and others have made location for No. 1 Hulshizer, NE cor. SW, Section 9-1s-8w, Stephens County. Carter Oil Co.'s No. 1 Iva Bridenthal, C NW SW SW, Section 3-1s-3w, set 12-inch at 146 feet. Skelly Oil Co. was building rig for No. 1 Miller, NE SE SW, Section 3-1s-3w. Carter Oil Co. was drilling at 1,068 feet in No. 1 Mary Riddle, C NW NE SW, Section 4-1s-3w, and was building rig for No. 1 Dolman, C NW NE NW, Section 10-1s-3w. W. H. Smith has made location for No. 1 McCrory, SW NE NE, Section 10-1s-3w.

Kansas Fields

(Continued from Page 44)

It was treated with acid at 1,837-63 feet and later pumped 2 bbls. an hour of oil and water. It was abandoned.

Anderson & Pence's No. 1-A Adams, SW NE SW Section 17-24-13, got the top of the Mississippi lime at 1,602 feet and sand at 1,610-20 feet and the oil rose 300 feet in the hole.

Gore and Phillips Petroleum Co. had machine rigged up to drill No. 4 Brothers, NW SW NE NW Section 35-23-11.

Atlantic Oil Producing Co.'s No. 1 Scheufler, C NW SE Section 16-20-11w, Barton County, had a hole full of water from Siliceous lime at 3,339-76 feet and was abandoned.

Rice County

Ramsey and others' No. 1 Saint, SE NE SE Section 31-19-9w, on the Chase townsite, swabbed 75 bbls. an hour from the top of Siliceous lime at 3,226 feet, total depth.

Gypsy Oil Co. deepened No. 1 McGlynn, NW SW SW Section 32-19-9w, from 3,219 feet to 3,227 feet, Siliceous lime, and the well produced 1,680 bbls. in the following 24 hours.

Keith and others' No. 1 Willie, NW NW SE SW Section 32-19-9w, was given a 100-gallon acid treatment and pumped 3 bbls. an hour. It will be re-acidized.

Atlantic Oil Producing Co. was drilling at 430 feet in No. 1 Brandenstein, C SE SE Section 10-19-10w, a wildcat. E. F. Jones and others were drilling at 390 feet in No. 1 Santa Fe, SE NE SE Section 31-19-9w. Ramsey and others were drilling at 330 feet in No. 1 Lansing, SE cor. NE Section 31-19-9w.

In the Stratman Pool, Aylward and others' No. 7 Stratman, NW SW SE Section 1-17-10w, swabbed 29 bbls. per hour, cut 8 per cent. It produced from Siliceous lime at 3,246-63 feet. It was held for potential test.

Derby Oil Co.'s No. 2 Stratman, NW NE Section 12-17-10w, was re-acidized and swabbed 305 bbls. in 24 hours. It was held for potential test.

In Ellis County

Davis, Hazlett and others' No. 1 Wieland-B, SE NW NE Section 1-13-16w, Ellis County, was drilled to 3,285 feet and plugged back to 3,131 feet. It swabbed 41 bbls. in 12 hours.

Bridgeport Machine Co. was rigged up to start No. 13 Mermis, SW cor. Section 33-13-15w. Beardmore, Palmer and the Gypsy Oil Co.'s No. 2 P. Wieland, NE SE SE Section 36-12-16w, was drilling at 425 feet and rig was up for No. 3, SW SE SE Section 36.

JOHN D. BRADY DIES

McPHERSON, Kans., Oct. 16.—John D. Brady, 50, inventor of the Brady separator, died in a hospital here soon after his automobile crashed into the end of a bridge railing about 4½ miles west of Canton. Witnesses said Mr. Brady apparently was blinded by the lights of an approaching car.

Operations Increasing in North Louisiana Area; Fifteen Rigs Are Making Hole in Mississippi

SHREVEPORT, La., Oct. 16.—Drilling operations in this division continue to show an upward trend on the weekly report of active rigs as well as a fair number of new locations and completions. North Louisiana leads the other districts in both new operations and completed wells, but Mississippi reports more than 15 rigs actively making hole. Of the 16 completions in this division, six were oil producers with two gas wells and eight dry holes.

NORTH LOUISIANA

The Zwolle and Converse Fields of Sabine Parish divided honors during the week with three producers each. In the latter area, the Windsor Oil Co.'s No. 1 Barr, Section 15-9-13, is flowing 65 bbls. daily through 2¼-inch tubing from 1,953 feet. Evans Brothers' No. 2 Crawford, Section 20-9-13, is another small flowing well of 40 bbls. daily from 1,854 feet, and C. L. Nixon's No. 1 Patrick, Section 21-9-13, was completed as a 25-bbl. pumper from 1,6 0 feet. All of the Zwolle producers were from the eastern area north of Many. D. D. Alexander's No. 2 Cooper, Section 31-8-11, was put on the pump for 50 bbls. from 2,343 feet, and George L. Pace's No. 1 Greer, Section 32-8-11, is flowing at the same rate from a total depth of 2,400 feet. The present flow is through 6-inch casing and will probably increase through tubing. The third producer from this area is Hardey Reeves' No. 1 Ponder, Section 15-7-11, flowing 75 bbls. from 2,675 feet.

The two gassers were from the Monroe-Richland district of Northeast Louisiana. In Ouachita Parish the Century Carbon Co.'s No. 3 Slaughter, Section 24-19-4, gauged only 500,000 feet from 2,205 feet. In the Richland area the United Carbon Co.'s No. 1 Noe, Section 14-17-5e, had a total open flow of 8,604,000 feet of dry gas with 970 pounds rock pressure from 2,410 feet.

The Rodessa deep gas area in the northwestern part of Caddo Parish registered one of its few failures, due mainly to all previous tests having been drilled on a limited structure. The Arkansas-Louisiana Pipe Line Co.'s No. 1 Williams & Windham, Section 4-22-16, tested dry and was abandoned in red shale at 6,659 feet. The only other wildcat test in North Louisiana to make a failure was the Llano Development Co.'s No. 1 Gulf Lumber Co., Section 6-1n-9, in Vernon Parish. This well reported the top of the Jackson at 2,162 feet and the top of the Cockfield at 3,150 feet, was drilled to a total depth of 3,952 feet where it was abandoned in lignite and shale. The other dry holes were all reported from the chalk horizon of the Zwolle and Converse Fields where they failed to hit a crevice in the chalk or failed to make commercial producers after a treatment with acid. Union County, Arkansas, furnished the only other completion in the division, E. R. Henderson's No. 1 J. A. Pattison, Section 19-18-14, which tested dry and was abandoned in hard shale at 2,360 feet.

Wildcats

None of the wildcats in North Louisiana developed anything of interest during the last seven-day period. The Gulf Refining Co. has set surface casing and is drilling on the first of a series of core tests on a geophysical high in Webster Parish, a few miles east of the town of Minden. In Bossier Parish, B. A. Sherrill's No. 1 fee, Section 18-19-11, is ready to test after resetting 6-inch casing for the second time. If the water in this well is coming from a bad casing seat, a fair gasser with some oil should result from a test, but if it is coming from the bottom of the hole, the operators will probably drill another test in that immediate vicinity. Caddo Parish, scene of the original field in Northwest Louisiana, has a number of active rigs in operation. Dillingham and others' No. 1 Early estate, Section 33-16-16, in the Bethany district, is rigging up; J. B. Hutchinson's No. 1 Story & Phillips, Section 28-16-13, cored green sand from 2,140-52 feet, and A. D. King, trustee's No. 1 Roach, Section 4-14-16, after setting 10-inch surface casing at 226 feet is drilling at 670 feet. This test is due to go to 4,500 feet. DeSoto Parish's two most interesting wildcats are State Production Co.'s No. 1 Wemple, Section 14-12-11, cored 2 feet of sand from 2,606-8 feet, and is arranging to set casing for a test, and Jack Whitson's No. 2 Sanders, Section 19-11-13, which is coring in lime at 3,230 feet. Guy Cox and others' No. 1 Lewis, Section 8-6-1e, Grant Parish, is drilling in gumbo at 2,395 feet with the top of the Cockfield logged at 1,163 feet and the base of the Sparta at 2,315 feet.

Of the 12 new locations in North Louisiana, four of them are wildcats in as many parishes with eight new operations listed for Zwolle and Converse. V. R. Hammons has assembled a block of 5,000 acres north of Benton in Bossier Parish centering around Section 2-20-13 with a contract to drill a 3,000-foot test immediately. George Greer and others will make another effort in Catahoula Parish near the gas and salt water shows of other tests. They are moving in rig on their No. 1 Millsaps in Section 22-10n-7e. Between the Homer and Haynesville Fields in Claiborne Parish, Bert Kendricks and others have derrick up on No. 1 Meadows in Section 22-22-7. A fair-sized block has been assembled and it is reported to be a 4,500-foot test. Rapides Parish will have another test on the Conroe-Jackson trend with A. G. Beck's No. 1 Westrchil, Section 42-4n-1e. Derrick pattern is on location.

ARKANSAS

Black Diamond Oil Co.'s No. 1 Miller Land & Lumber Co., Section 29-18-27, Miller County, after topping the Nacatoch at 1,812 feet, made a drill stem test at 1,822 feet with barren results, and is coring at 1,825 feet. In Columbia County, C. W. Allworth and others made a dry test on their No. 1 King, Section 16-17-20, and are driling deeper. Two new rigs are moving in in separate counties, J. E. Elliott's No. 1 Nevin, Section 27-4-10, Jefferson County, and Charles Steele's No. 1 Combs in Section 25-18-16 in Union County.

MISSISSIPPI

The Covington County deep test, Eastman & Gardiner's No. 1 Bank of Deming, Section 26-8-15, is drilling in shale at 7,8 8 feet and is thus continuing to make deep drilling history in this division. One new location was reported from this state with B. D. Tinsley and others' No. 1 Mechanics State Bank, Section 28-3n-7e, in Pike County, near the town of McComb. In the Hinds-Rankin area, Hensley & Tanner's No. 1 Hudson, Section 11-5-1e, topped the black shale at 2,320 feet and has set 7-inch casing at 2,399 feet. Love and Lancaster have spudded in on their No. 2 Elton Plantation, Section 9-4-1e, and the Meredith Trading Co. is rigging up on its No. 1 Nelson in Section 24-6-1e. The Love Petroleum Co. has taken over the United Gas Public Service Co.'s No. 1 McLaurin, Section 19-6-2e, and will drill deeper. This test topped the chalk at 2,593 feet and the corrected total depth is 2,632 feet.

Daily Average Runs

The fields of North Louisiana and Arkansas showed a net increase of 175 bbls. in the daily average runs during the past week. The former showed an increase of 230 bbls. while Arkansas declined 55 bbls. on the daily average. The runs from the several pools were:

NORTH LOUISIANA

	Bbls.
Caddo light	4,660
Caddo heavy	1,375
Converse	620
Cotton Valley	480
DeSoto and Red River	1,505
Elm Grove	385
Haynesville	3,810
Holly	200
Homer	2,640
Pleasant Hill	250
Sarepta-Carterville	815
Urania	2,650
Zwolle	6,430
Total North Louisiana	25,820
Total previous week	25,590
Increase	230

ARKANSAS

Champagnolle	1,315
El Dorado	2,560
Lisbon	415
Miller County	480
Nevada	525
Smackover light	2,640
Smackover heavy	21,300
Stephens	650
Urbana	3,040
Total Arkansas	32,925
Total previous week	32,980
Decrease	55
Total both states	58,745
Total previous week	58,570
Increase	175

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

BIENVILLE PARISH

Company, well, farm name, section and block— Remarks:

Poole & Johnson's No. 1 H. E. Sudduth, 1,170 ft. E and S, C Sec. 28-14-1e ..... Derrick.

BOSSIER PARISH

B. A. Sherrell, tr.'s No. 1 fee, NE NW NW Sec. 18-19-11.. Bad csg. seat reset.

CADDO PARISH

R. E. Davidson et al's No. 1 DeWitsey MacMillan, 500 ft. N, 330 ft. E, SW cor. Lot 16, Sec. 23-16-13..... Location.

J. B. Hutchinson, tr.'s No. 1 Story Phillips, 330 ft. N and E, SW cor. SW NE SE Sec. 28-16-13..... Coring 2,152 ft.

CALDWELL PARISH

Hartley et al's No. 1 Taylor, most southeasterly cor. Sec. 42-14-4e ..... Derrick.

DE SOTO PARISH

Bailey Gantz et al's No. 1 Jenkins, NW cor. SE SW Sec. 35-13-13 ..... Moving in heavy rig; T.D. 3,090 ft.

J. H. McKenzie's (was P. B. Dyer's) No. 2 B. F. Jenkins, 330 ft. N and E, SW cor. NW SW Sec. 35-15-12.. Cmtd. 6-in. 2,430 ft.; S.D.; W.O.

Hirschfield-Bailey Interests' No. 1 Mickle, 660 ft. N and E, SW cor. SE Sec. 7-13-13 ..... Waiting on csg. 1,775 ft.

N. B. Porter's No. 1 J. W. Porter Est., 330 ft. N and E, SW cor. SE SE Sec. 23-12-13 ..... Tested dry and S.D.; T.D. 1,204 ft.

D. H. Sebastian, Jr.'s No. 1 W. H. Hill et al, 200 ft. S and E, C Sec. 3-10-13 ..... Derrick.

GRANT PARISH

L. L. Lindsey et al's No. 1 Edenborn, 250 ft. E, 150 ft. N, SW cor. SE SE Sec. 13-7-4 ..... Drlg. gur. at 2,395 ft.

OUACHITA PARISH

Hope Prod. Co.'s No. 1 Cole Hrs., 150 ft. S, 1,650 ft. W from NE cor. of SE ..... Began drlg. Sept. 23; set 12½-in. csg. 167 ft.; set 8-in. 831 ft.

SABINE PARISH

Frank R. Foster, Inc.'s No. 1 D. E[illegible] S and E NW cor. SE NW S[illegible] Drlg. 2,710 ft.

CONVERSE DISTRICT

Arrock Oil Co.'s No. 1 Hewitt, 330 ft. N and E, SW cor. NE SE Sec. 20-9-13 ..... Set 6-in. at 1,509 ft.; T.D. 1,513 ft.

A. G. Craig's No. 1 Belton, 330 ft. N and E, SW cor. NW NW Sec. 33-9-13 ..... Rigged up; W.O.; fuel.

Helena O. & G. Co.'s No. 1 E. K. Harris, 990 ft. S and W, C Sec. 10-9-13 ..... Derrick.

Mamie S. Hammond's No. 1 Patrick, 330 ft. N, 2,310 ft. W. SE cor. Sec. 1-9-13 ..... T.A. 3,235 ft.

H. C. Lessinger's No. 1 Bowman-Hicks Lbr. Co., 338 ft. S and E, NW cor. SW Sec. 13-9-13 ..... Blew out; gas and S.W. killed, but stuck D.S. 7 ft. off bottom; T.D. 3,285 ft.

C. L. Nixon's No. 1 Patrick, 330 ft. S and E, NW cor. NE SW Sec. 21-9-13 ..... Comp. Oct. 5; pumping 25 bbls.

Sabine Royalties Co.'s No. 1 Balew & Carter, 330 ft. N and E, SW cor. NW SW Sec. 21-9-13 ..... Dry and abd. 2,008 ft.

J. E. Sedbury's No. 1 E. K. Harris, 990 ft. W, 330 ft. S, C Sec. 10-9-13 ..... Derrick.

Wm. Stewart et al's No. 1 Latham, 330 ft. N and E, SW cor. NW NE Sec. 22-9-13 ..... Set 6⅝-in. csg. 1,499 ft.

Homer Tyson's No. 1 G. W. Hough, 330 ft. S and E, NW cor. SW NW Sec. 31-9-12 ..... S.D. 40 ft.

Windsor O. & G. Co.'s No. 1 Barr, 330 ft. E, 990 ft. N, SW cor. NW Sec. 15-9-13 ..... Comp. Oct. 6; pumping 65 bbls. from 1,953 ft.

Windsor Oil Co.'s No. 2 Barr, 330 ft. N and E, SW cor. NW Sec. 15-9-13 ..... Location.

Arkansas

COLUMBIA COUNTY

C. W. Alworth et al's No. 1 W. D. King, SW cor. SE SW Sec. 16-17-20 ..... Coring shale 1,876 ft.

JEFFERSON COUNTY

J. E. Elliott's No. 1 B. V. Nevin, 440 ft. N and E, SW cor. SW NW Sec. 26-4-10 ..... Moving in rig.

HEMPSTEAD COUNTY

Kentucky O. & G. Co.'s No. 1 Leslie, NW cor. SW NW Sec. 21-9-26 ..... Derrick

LONOKE COUNTY

Joe D. Strahan's No. 1 Hardin, 300 ft. S and E, NW cor. NW NW Sec. 18-2n-7 ..... Rigged up and W.O.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 2 Beck, 330 ft. S and E, NW cor. SE SW Sec. 34-15-26 ..... S.D. 2,812 ft.

OUACHITA COUNTY

I. D. Reynolds' No. 1 Snow Hill Baptist Church, 525 ft. E, 115 ft. S, NW cor. SE SW Sec. 28-15-15.... Set 6-in. 1,960 ft.; T.D. 1,969 ft.

POINSETT COUNTY

Ark. State O. & G. Co.'s No. 1 fee, C NE NE Sec. 13-11-3e ..... Derrick.

UNION COUNTY

Chas. Steele's No. 1 J. B. Combs, 150 ft. N, 185 ft. W, SE cor. SW NW Sec. 25-18-16 ..... Moving in rig.

(Continued on Page 68)

Important New Pool Opened in Duval County; Balcones Fault Area Getting More Attention

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Oct. 16:—Al Buchanan's No. 1 Duval Ranch Co., Survey No. 206, north of the North Government Wells Pool 4 miles, in northern Duval County, was brought in Saturday afternoon. It flowed at the rate of 20 bbls. hourly till storage on lease was filled and it was shut in. It opens an important new pool, making no water. Production is from Cole sand at 1,475-83 feet, with 7-inch casing set at 1,463 feet. The drill stopped in sand which is probably much thicker. They are now building more storage. Rig is being moved 1,320 feet due south to drill R. D. Kelley's No. 1 Foster. Other features of the week were a showing of oil in Love & Evans' No. 1 Brown, in Edwards County, at 2,450 feet in a sand member of the Pennsylvanian, and failure of Holland Oil Co.'s No. 1 Copeland in Bee County to find any Pettus sand after getting the top of the Jackson high.

Peery, Woodie & Boler's No. 1 Milburn, 15 miles southwest of San Antonio, their second attempt to bring in an Edwards lime pool in Bexar County, is a failure at 1,500 feet total depth, 10 feet into the Edwards and showing a trace of oil. It is a quarter mile west of No. 1 Kearney that took a good core in the Edwards and caused considerable excitement and resulted in drilling No. 1 Milburn, but the Milburn got the Edwards 30 feet lower than No. 1 Kearney. The direction of the fault line is northeast and southwest and some geologists at least count that the Milburn getting the formation low indicates a closure on the southwest and argues for drilling another test to the north of the Kearney and northeast of No. 1 Milburn. The operators have not announced any further intentions.

Balcones Fault Area

The Balcones fault for the next few weeks is due to attract considerably more attention than it has for some months back. Walton & Weinert's No. 1 Sorrelle, in the southwest corner of Guadalupe County, on acreage secured from the Sinclair Prairie Oil Co., is drilling and late in the week was below 1,250 feet. O. W. Killam, 6 miles southeast of Seguin and several miles west of the lower end of the Darst Creek Field, is about ready to spud in on fee land for a test on the theory of a faulting northwest of and parallel to the Darst Creek faulting. Also, C. J. Webster Oil & Gas Co.'s (L. E. Trout) No. 1 McKey, 4 miles southwest of the Darst Creek Field, should spud in this week and Barnhill is already rigged up for a test east of Seguin and a location or so west of the discovery well of the Sal-Mar Field. Several tests were drilled around the discovery well but failed to get production and it is the only producer. This makes four Edwards lime tests in Guadalupe County.

North Government Wells

North Government Wells failed to get an extension north the past week but it did get a dry hole on the south end when Smith & Story's No. 5 Lundell was abandoned at 2,465 feet. It is a half mile southwest of the nearest producer in the field and that a lone outpost producer a half mile southwest of its nearest production in the field. Navarro Oil Co. widened out the north end of the pool the past week with No. 10 Hahl which came in for 40 bbls. an hour on choke and the same company's No. 11 Hahl, 330 feet from the north and west lines of the W half of Survey No. 360, is on the sand with casing set, and Humble's No. 15 Hahl, 330 feet from the north and west lines of the E half of the same survey, is also on the sand with casing set. They are both likely to be good producers which will make the north end a half mile wide. Seven wells in the pool were due to be completed over the week-end.

At the north end of the South Government Wells Pool and south end of the original Government Wells Pool, Humble Oil & Refining Co.'s No. 11 White was drilling in late in the week and looks like a producer. It leaves less than half a mile between the two fields.

Only one of the nine wildcats north of the North Government Wells Pool has made much depth thus far other than Buchanan's No. 1 Duval Ranch Co., in Survey 206, and that is Paul C. Teas' No. 1 Hagist, in Survey 181 in McMullen. It was down below 1,400 feet at last reports and should have been at Cole sand depth over Sunday. Most of the others are making hole.

In the North Kohler Pool, Shasta's No. 4 Peters (carried by some as No 1-D Peters), which made a 15-bbl. well at 2,360 feet, completed a few months ago, has rigged up again and is plugging back to a gas sand at 1,733 feet. It is an outpost well at the north end.

At the south end of the East Cole Field in the southwest corner of Duval County, Motes-Campbell are arranging to try for deeper sand. The Cole Field produces gas at around 1,700-1,800 feet. Magnolia Petroleum Co. has one oil well at 2,770 feet completed a few years ago that has been averaging around 100 bbls. a day for some time. Motes-Campbell will drill No. 1 Bruni in Section 493 of the Myrtle E. Hale Subdivision of the Arispe grant about a mile southwest of the Magnolia well.

Starr County

Before the week is over Sun Oil Co. will probably have another oil well in the new Cuevitas Pool in northwestern Starr County, making the fifth for the field. No. 5-A Guerra was on the sand at 2,257-67 feet with casing set at 2,250 feet late last week. New operators are entering this field for the first time. William McGinley and B. F. Weakley have 1,000 acres out of the north end of Porcion 110, 3 miles southeast of Sun's discovery well, and have derrick up, and Edgington, of Laredo, has derrick up on Porcion No. 109, next southeast of McGinley and about 1½ miles farther southeast.

The week chalked up another dry hole for the area around the Jeffries-Lambeth discovery gas well on the Starr County Cattle Co. land, 9 miles northeast of Rio Grande City. It is Harrison's No. 1 Garcia, but is over a mile southeast of the discovery well. The other dry hole is Shankle and others' No. 1 Garcia, a mile north of the discovery well. This leaves Meyers, Jenkins and others drilling 2 miles south and Goodwin & Yantis drilling 2 miles northwest. Jeffries-Lambeth have not yet started any further development of their find.

The understanding is that a settlement has been reached in the matters that tied up Chancellor & Hall's No. 1 Garcia, in the southwest corner of Hidalgo County, and that a test may be expected soon. Total depth is 3,187 feet, where it had quite a showing of oil two or three months ago and has been tied up ever since waiting to make a test.

Two tests along the Jackson trend have been getting some attention. Holland's No. 1 Copeland, in Bee County north of the Cosden Pool, topped the Jackson high but when it arrived at the Pettus sand horizon there was no sand there. Sands pinch out in that territory. At 3,752 feet it had reached contract depth but has since resumed drilling.

The other is C. B. Bunte, Inc.'s No. 1 Buckhorn, in the center of DeWitt County. At 2,320 feet it topped the Jackson and, though there are not many wildcat tests around there to correlate with, it seemed to most folks to be high. Contract calls for the Conroe sand, or 3,800 feet, and with the top of the Jackson at 2,320 feet it should reach the Conroe sand within contract depth.

Edwards County

Love & Evans' No. 1 Brown, in Edwards County, 16 miles west of Rocksprings, last week at 2,450 feet had sand showing a little oil in the top. It is expected to core deeper and then test. The sand is a member of the Pennsylvania and some thinks it correlates with the sand at 2,552 feet that produced considerable oil in Evans & Gant's No. 1 Love in southwestern Kerr County, 40 miles to the east. If that is the case then the Edwards County test is running plenty high.

Bastrop County

Marts & Beavens' No. 4 Reyes, in the new pool near Cedar Creek in Bastrop County, reported last week as dry, seems to have been a mistake. It is standing full of oil and slopping over the top of the casing. It got the Serpentine 30 feet higher than in the discovery well and is estimated when on the pump to be good for around 200 bbls. daily. This is their third producer and fourth test drilled. The first test almost made a well. The discovery well, which came in for around 100 bbls., has been increasing and has lately been making 230 bbls. pipe line oil daily.

Fritz Fuchs' No. 1 Zeitschang, in Williamson County, 8 miles southeast of Taylor, has been completed in Serpentine at 1,075 feet for 10 bbls. daily on the pump. Serpentine was topped at 855 feet. When the well first got its showing some few weeks ago it created quite a little excitement as it was a wildcat opening a new pool. The production was a little disappointing as to volume, but further drilling in that district may result in bigger wells as that sometimes happens in Serpentine fields, and when pumped it may increase in volume. At any rate, it is a new field.

Humble Oil & Refining Co. is doing some core drilling on a block in Williamson County, the first location being on the J. West Survey.

Wildcat Operations in Southwest Texas

Week Ending October 14

Company, well, farm name, section and block—	Remarks:
ATASCOSA COUNTY	
A. Blume's No. 1 Shaw, 690 ft. from N line, 1,780 ft. from E line of 100-ac. tract in W. Farquhar Sur. No. 275	T.D. 1,996 ft.; reinstated; to resume drlg.
BASTROP COUNTY	
J. E. Emanuel's No. 1 H. Klemm, 317 ft. from W line, 300 ft. from S line of tract in R. S. Teal Sur.	T.D 550 ft; standing.
Ca-Tex O. & G. Dev. Corp.'s No. 1 Pendergrass, 1,343 ft. from NE, 310 ft. from SE line of 130-ac. tract in Henry Warnell Sur.	Rigged up and S.D.
Three Oil Co.'s No. 1 M. Ingram, 1,250 ft. from SW line, 940 ft. from SE line of tract in M. Morgan Sur.	Rigged up.
BEE COUNTY	
Grisham et al's No. 1 Powell, 900 ft. N, 500 ft. W of SE cor. of J. A. Reed Sur.	Drlg. wtr. well.
Holland Oil Co.'s No. 1 Copeland, NE cor. of 400-ac. tract in Pace Sur.	T.D. 3,752 ft.; D.D.
W. P. McLain's No. 1 Weiss, 400 ft. E of line between E. S. Price's Nos. 1 and 2 Weiss	T.D. 1,050 ft.; drlg.
BELL COUNTY	
Gus Winston et al's No. 3 Warrick, 100 ft. N of James Scoggins' No. 1 Warrick, in Elijah Ingram Sur.	T.D. 1,312 ft.; fishing.
R. S. Wilson's No. 1 Davenport, 200 ft. from W line, 700 ft. from S line of J. L. Herred Sur.	T.D. 1,235 ft.; standing.
BEXAR COUNTY	
C. I. Albertson's No. 2 C. Hoke estate, 675 ft. from E line, 250 ft. N of Medina River in Jose Maria Barrera Sur.	T.D. 570 ft.; drlg. shale.
F. J. Von Delden et al's No. 1 Frank Webber, 150 acres in J. Montes No. 6	T.D. 100 ft.; standing.
Austin Hull's No. 1 Classen, 265 ft. from W line, 2,500 ft. from S line of tract, 12 miles N of San Antonio.	T.D. 1,810 ft.; standing
LaSalle Oil Co.'s No. 1 City Sewage farm, 150 ft. S of Rilling Road, 450 ft. W of NE cor. of tract in D. Bustillos Sur.	T.D. 75 ft.; standing
C. J. LeCompte's No. 4 R. Diaz, 324 ft. NE of No. 1	T.D. 320 ft.; abd.
Motes-Campbell's No. 1 Pruitt, 550 ft. NE of Trussells' No. 1 Pruitt, 54 varas from E line of tract in Samuel McCullough Sur.	T.D. 1,065 ft.; abd.
Motes-Campbell's No. 1 Stumberg, 990 ft. from N line, 450 ft. from W line of F. Rolen Sur. No. 48	T.D. 1,135 ft.; abd.; dry.
Motes-Campbell's No. 2 Stumberg, 450 ft. from N line, 450 ft. from W line of S. Stumberg 140-ac. tract in F. Rolen Sur. No. 48	T.D. 597 ft.; drlg.
George L. O'Neill's No. 1 Neimann in Juan Montes Sur. No. 6	T.D. 668 ft.; drlg.
Fred Perrenot's No. 1 Ruiz, SE cor. of 82-ac. tract in F. Rowland (Rolen) Sur. No. 48	T.D. 819 ft.; standing.
Fred A. Perrenot's No. 1 Russell, 750 varas from NE line, 54 varas from NW line of 590-ac. tract in Rodriquez Sur.	T.D. 1,315 ft.; standing
H. A. Pagenkopf's No. 1 G. A. Goeth, 500 ft. from SE line, 600 ft. from SW line which is San Antonio River, Juan Montes Sur.	T.D. 2,010 ft.; hole clear; standing.
Perry, Woodie & Boler's No. 1 Milburn, 450 ft. from N line, 150 ft. from E line of 103-ac. tract in S. C. I. Perez Sur., 15 miles SW from San Antonio	T.D. 1,500 ft.; abd.; topped Edwards 1,490 ft.

(Continued on Page 69)

Well in Cameron Meadows, Louisiana, District, Extending Field a Half Mile to the North

By W. A. SPINNEY
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Oct. 16.—The Cameron Meadows district of southern Cameron Parish, Louisiana, produced a good well, extending the field a half mile north, with the completion of Burton-Sutton Oil Co.'s No. 1 School Land. This well, in the SE cor. Section 16-14s-13w, came in flowing initially at the rate of 1,500 bbls. daily through a half-inch choke with pressure of 500 pounds from a sand at approximately 4,400 feet after plugging back from a total depth of 6,825 feet.

The location of this well is in a 640-acre tract just north of Magnolia Petroleum Co. and Humble Oil & Refining Co.'s Cameron Meadows block, on which three wells have been drilled and a fourth is drilling. The discovery well on the Magnolia and Humble block and the farthest north of the three wells to date on the block, was drilled by the former Vacuum Oil Co., being completed in January, 1930, flowing initially an estimated 500,000 feet of gas with about 100 bbls. daily net oil from a sand at 3,850 feet. Magnolia Petroleum Co. inherited the block in the merger of the Vacuum Oil Co. with the Standard Oil Co. of New York group and drilled the second producer, 500 feet south of the first well, completing it in a deep sand at 5,270 feet making about 600 bbls. daily. The third well, 500 feet south of the second, failed to get commercial production but drilled to salt around 5,800 feet proving the dome. Recently Humble Oil & Refining Co. acquired an undivided half interest with Magnolia in the block and now is drilling the fourth test, No. 4 Cameron Meadows, located still farther south and about a mile south of the Burton-Sutton well.

Conroe

Conroe, in which for some time there have been only routine field developments, figured the past week in an important trade when Humble Oil & Refining Co. acquired Republic Production Co.'s Griffin lease and Houston Oil Co.'s half interest in the 60-acre American National Bank lease, both in the Wilson Strickland Survey, adjoining each other. The Griffin lease is approximately 135 acres and has three producing wells. The Houston Oil Co. property, in which the Tide Water Oil Co. owns the other half interest, is undrilled although both leases are in the heart of the field.

The consideration involved in these trades was not revealed but the location of the two tracts is such as to bring the top price for proven acreage in the Conroe Field, which should be on a basis of at least $3,500 to $4,000 per acre.

Rumors were current that negotiations were under way for the sale by Dick Schwab of his block in southern Polk County on which is located a wildcat, No. 1 Kirby & West, Geraldus Thomas Survey, which is showing for a well and the opening of another new field. The rumors have been denied by all concerned. The block is about 9 miles southeast of the Livingston Field, which also was discovered by the same operator.

At latest report the wildcat was preparing to drill plug to test a Cockfield in which a drill stem test at 4,711-71 feet recently showed for a gasser. Cores in the sand from 4,726-40 feet showed an oil saturation although no oil or water was recovered on the drill stem test. There was, however, some distillate shown. A string of 7-inch casing was cemented at 4,700 feet.

The block consists of about 2,000 acres. Principal leaseholders in the immediate vicinity of the block include Shell Petroleum Corp., Sinclair Prairie Oil Co., Sun Oil Co., Gulf Production Co. and Humble Oil & Refining Co.

Tomball Field

In the Tomball Field, Harris County, four tests were showing oil in the process of being completed over the week end. These were Humble Oil & Refining Co.'s No. 2 Bloecher, C. Goodrich Survey, in which was found a showing of oil from 5,584-90 feet with bottom in water sand from 5,599-5,616 feet; same company's No. 1 Fredericks, J. M. Hooper Survey, which was showing oil at 5,572 feet; same company's No. 1 Theis, C. Goodrich Survey, which was setting screen at a total depth of 5,580 feet, and Texas Co.'s No. 1 H. Martens, C. Goodrich Survey, which also was setting screen and liner prior to completing at 5,576 feet.

Stanolind Oil & Gas Co.'s No. 1 W. Theis, J. H. Edwards Survey, a wildcat test about a mile northwest from the nearest production in the Tomball Field, showed considerable gas on a drill stem test early in the week in a sand from 5,268-76 feet. The testing tool was open three minutes showing 400 pounds gas pressure and some distillate. It was drilling deeper on the last report at 5,367 feet in shale. The regular sand in the Tomball Field is found in the vicinity of 5,550 feet and the owners of this test plan to drill to that horizon. Formations in this test are reported to be running higher than in any test in the field proper.

Washington County

Strake Petroleum, Inc.'s No. 1 Henry Wehmayer, a wildcat test in southeastern Washington County, has been abandoned temporarily at a total depth of 5,590 feet in sandy shale.

Jefferson County

The Jefferson County wildcat test of the Sun Oil Co. and Shell Petroleum Corp., No. 1 Paggi, near the townsite of Nome, is still swabbing. This test has been nearly a month trying to complete. It was given a corrected total depth during the week of 6,031 feet. It first found a showing of oil and gas on the drill stem test from 6,003-23 feet, but has been drilled a few feet deeper where screen has been reset.

Colorado County

Humble Oil & Refining Co.'s No. 1-C Powell, Garwood area, Colorado County, was drilling in shale at 6,200 feet on the last report. It is the sixth test to be drilled in the area. The first was completed as a wet gasser at 4,050 feet, another made an oil well for a short time at 6,203 feet, and the others were dry holes. Humble Oil & Refining Co.'s No. 1-C Powell is southwest from the discovery gas well.

Jackson County

Continental Oil Co.'s No. 1 Vincek, a wildcat in Jackson County, was drilling on the last report at 6,300 feet. It is drilling past the contract depth of 6,000 feet. This test has not encountered any particularly favorable showings and no announcement has been made as to what depth it will be carried.

Harris County

A deep test in Harris County was abandoned during the week as a dry hole at a total depth of 6,946 feet. This was Hamilton and others' No. 1 Hargroves, in the Washington County Survey, about a mile west of Fairbanks.

Polk County

In the Livingston area of Polk County, Skelly Oil Co.'s No. 1 Sanders, a southwest extension well in the field, is still fishing tubing preparatory to working over. The test recently was brought in as a gasser making some oil from sand at 4,315 feet. It later blew out and ran wild for several days. The same company is making a second location, this being near the center of its 45-acre tract.

Another test in the Livingston Field that may extend production a half mile farther southwest is Vick H. Borsodi and others' No. 1 J. M. West Lumber Co., which is nearing the depth the pay sand is expected. It was drilling at 4,050 feet on the last reports.

Arriola

At Arriola in Hardin County the Republic Production Co. and Houston Oil Co.'s No. 4 Arriola, which was blowing wild for a short time about two weeks ago, has been on steady production making around 1,750 bbls. of oil daily through a one-half inch choke. No additional locations have been announced up to the time this was written.

Greta Proration

The Texas Railroad Commission has issued a special proration order for Greta, Refugio County, prorating the field on the acreage basis. It is the only proration order of its kind in the State of Texas at this time The order, which was effective October 7, states that no owner of any well in the Greta Field shall produce any well on any one day in excess

Gulf Coast Fields and Wildcats

Week Ending October 14

DAMON MOUND—BRAZORIA COUNTY

Company, farm and location—	Remarks
Intercoastal Oil Co.'s No. 11 Wisdom, 350 ft. E of No. 6, Blk. 51, Lot D, A. Durst Sur.	T.D. 3,160 ft.; D.S. stuck at 2,127 ft.

MANVEL—BRAZORIA COUNTY

Texas Co.'s No. 3-B Belcher, 2,747 ft. NE, 1,478 ft. SE of W center of lease	Drlg. sand 2,103 ft.
Texas Co.'s No. 5-A Belcher, S 40 deg. W 3,430 ft., S 48 deg. E 300 ft. from N cor. of "A" lease, H. N. Little Sur.	Drlg. shale and lime 5,399 ft.
Texas Co.'s No. 6 Belcher, H. N. Little Sur., South 42° W 2,400 ft. and S 48° E 400 ft. from N cor. lease	T.D. 5,476 ft.; 7-in. csg. cmtd. at 5,382 ft.
The Texas Co.'s No. 2 Davis, 300 ft. out of S cor. Lot 42, H. N. Little Sur.	T.D. 5,812 ft.; cmtd. back to 3,790 ft.; standing.
Texas Co.'s No. 1 Ellis, 1,660 ft. N, 807 ft. S, from NW cor. of lease, H. N. Little Sur.	Drlg. sand 2,105 ft.

STRATTON RIDGE—BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 3 Seaborn (W.O.), Austin & Williams Sur., 1,250 ft. E of W line, 4,550 ft. S of N line	T.D. 5,580 ft. in salt; P.B. to 4,350 ft.; drlg. new hole 4,475 ft.

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Prod. Co.'s No. 2-B Gulf fee, Wm. Bloodgood Sur., 1,240 ft. N along N line, 800 ft. E at right angles to W line	T.D. 885 ft.; abd. in cavity.
Mills Bennett Prod. Co.'s No. 5 Fisher, Wm. Bloodgood Sur., 75 ft. N line, 191 ft. W of No. 4	W.O. 4,407 ft.
Mills Bennett Prod. Co.'s No. 3-E Gulf fee, 442 ft. W along S line, 710 ft. N at right angles to S line	Drlg. gumbo 1,404 ft.
Mills Bennett Prod. Co.'s No. 3 J. B. Means, 300 ft. W of No. 2 in center of strip (W.O.)	T.D. 5,467 ft.; P.B. to 5,080 ft.; comp. 1,060 bbls.; ¼-in. choke.
Mills Bennett Prod. Co.'s No. 1-D Barber, 78 ft. S, 65 ft. W of NE cor.	Drlg. shale 828 ft.
Humble O. & R. Co.'s No. 3-C Kirby, H. Griffith Sur., 311 ft. from SE line, 659 ft. NE line of lease	Drlg. 1,020 ft.
Sinclair Prairie Oil Co.'s No. 14 Wilburn (W.O.)	Rigging; T.D. 3,661 ft.
Sinclair Prairie Oil Co.'s No. 15 Wilburn, Henry Griffith League, 150 ft. W of No. 14	Derrick.
Sinclair Prairie Oil Co.'s No. 16 Wilburn, 50 ft. N and 50 ft. W of No. 12	Drlg. salt 1,490 ft.
Sun Oil Co.'s No. 11 J. Wilburn (W.O.), Wm. Hodges Sur.	Drlg. sand 5,443 ft.
Sun Oil Co.'s No. 14 J. Wilburn, Henry Hodges Sur. (W.O.)	T.D. 4,857 ft.; swabbing.
Sun Oil Co.'s No. 16 J. Wilburn, Henry Griffith Sur. (W.O.)	T.D. 3,760 ft.; rigging to W.O.
Sun Oil Co.'s No. 17 Wilburn, Henry Griffith League, 150 ft. W of No. 6 and 50 ft. S of N line	Derrick.
Texas Co.'s No. 7 Wilburn (W.O.), Henry Griffith League	Fishing drill pipe 5,174 ft.
Texas Gulf Prod. Co.'s No. 2-B Barber (W.O.), Henry Griffith League, 320 ft. W SE cor., 70 ft. W of S line	Prepare to W.O.; T.D. 5,100 ft.
Texas Gulf Prod. Co.'s No. 3 C. Kirby (W.O.)	Comp. 42 bbls. in 8 hrs.; 5,024 ft.
Texas Gulf Prod. Co.'s No. 2 Fitzgerald, Henry Griffith League, 300 ft. W line, 80 ft. S line	Drlg. salt 2,200 ft.
Yount Lee Oil Co.'s No. 21 Chambers County (W.O.), Wm. Bloodgood Sur.	Drlg. salt 4,180 ft.
Yount Lee Oil Co.'s No. 22 Chambers County, Wm. Bloodgood Sur., 200 ft. from W line, 262½ ft. from N line of lease	Drlg. sand and shale 5,012 ft.

BIG CREEK—FORT BEND COUNTY

C. & C. Drlg. Co.'s No. 1 Wheat, M. Young Sur., 265 ft. NE of Gulf's No. 3 Wheat	Drlg. shale 3,925 ft.
Gulf Stream, Inc.'s No. 1 A. H. Theis, 236 ft. E of old No. 4 A. H. Theis in line, Mitchell Young Sur.	Derrick.

RABBS RIDGE—FORT BEND COUNTY

Humble O. & R. Co.'s No. 16-B Lockwood & Sharp, John Rabb Sur., 2,872 ft. W of E line, 376 ft. N of S line, No. 1 tract	Drlg. sand 2,149 ft.
Humble O. & R. Co.'s No. 17-B Lockwood & Sharp, 2,872 ft. N of E line, 1,129 ft. N of S line of L. & S. No. 1-A tract	Drlg. sand 5,263 ft.

(Continued on Page 70)

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of the amount due that well in accordance with the following table, which is based on acreage assignable to the specific well:

Acreage assignable—	Allowable prod. in bbls.
15	120
16	128
17	136
18	144
19	152
20	160
21	168
22	176
23	184
24	192
25	200

This order permits 120 bbls. of oil for the first 15 acres, with 8 bbls. of oil additional for each additional acre served by the well up to and including 200 bbls. for 25 acres, which is the maximum. No well shall be assigned production allowance on acreage in excess of 25 acres of surface ownership.

The order also requires that all operators shall file with the deputy supervisor at Refugio a detailed unit map of their property or properties unitized as nearly as possible in conformity with the commission's spacing rule in effect in said field. The schedule of allowables shall be issued by the commission's deputy supervisor in charge of the Greta Field on the first and sixteenth day of each month. In making up schedules, allowance shall be made to cover completions due in the ensuing period.

The Texas Railroad Commission has called another meeting of operators in the Greta Field for October 21, at the Refugio County courthouse, to discuss the petition of W. L. Pearson for a special order covering the proration of oil from the newly opened 5,900-foot sand. The petition calls for a higher allowable from the 5,900-foot sand than is now permitted from the 4,400-foot sand.

During the week seven wells were completed in the Greta Field, some of which extended production while others were inside wells. Floboots Oil Corp.'s No. 1-C O'Brien, in E. H. Winfield Survey, was completed for 310 bbls. a day and is the most northerly producer in the field. It extended production a quarter of a mile to the north. This well found its oil in the regular Greta sand at 4,409 feet. Texas Gulf Producing Co.'s No. 1 J. M. O'Brien, J. H. Peoples Survey, extended production in the Greta Field a quarter of a mile to the northwest. It was completed for 450 bbls. a day through a one-quarter and three-sixteenths inch choke from sand at 4,395 feet. The other wells were inside producers and it was estimated that the seven wells would make around 7,000 bbls. a day if permitted to flow wide open.

Refugio County

A number of interesting wildcat tests are drilling and getting started in Refugio County at this time. They are the Texas Co.'s No. 1 Rooke, in the J. M. Aldrette Survey, Bonnie View district, south of Refugio, which was drilling at 4,080 feet on the last reports. This test is being watched with considerable interest as it is believed to be favorably located on structure. Wellington Oil Co.'s No. 1 Roach is located on the adjoining lease to the Texas Co.'s No. 1 Rooke, and is preparing to start operations. C. B. Bunte and others' No. 1 F. B. Rooke is located in the same survey with the Texas Co.'s test but is about 2½ miles west of it. These three wildcat tests are drilling within a radius of 3 miles and they are expected to reveal the location of the structure in this area.

Victoria County

The showing of oil encountered in the Stoneleigh Oil & Gas Co.'s No. 1 Zimmer, in the Coleta Creek district of Victoria County, while it was drilling at 2,946-84 feet, has stimulated the buying of leases and royalty in that district. One of the owners of this test sold an interest in the block and well to Albert Plummer, of Houston, who has taken over operations and is drilling the test deeper to the 4,400-foot level. The discovery well in the Coleta Creek district was drilled by the Stoneleigh Oil & Gas Co. and completed in May of this year as a gas well at 4,417 feet. The No. 1 Zimmer is about a half mile east of the discovery gas well. The territory surrounding these tests is all under lease and two other tests are starting. John F. Camp's No. 1 Maurer is the south offset to the No. 1 Zimmer and is drilling below 1,100 feet. Stoneleigh Oil & Gas Co.'s No. 1 Dietzel, about a mile east, is rigging up. There are also a number of locations in the vicinity.

Louise Area

In the Louise area of Wharton County, Pure Oil Co.'s No. 1 Hudgins, a wildcat test about 2 miles south of the most southerly test in the Louise area, found salt water in sand at 6,196 feet. Same company's No. 1 Stewart, which was drilled to a total depth of 8,067 feet, where it blew out and was plugged back to a showing of oil that was found in a Frio sand at 5,963-71 feet, made about 800 bbls. of oil and considerable salt water. The water is believed to have come from the bottom of the hole due to failure of the cement plug to hold. The company killed the well and is plugging back about 500 feet to sidetrack and drill a new hole to the sand. All the other tests are drilling below 4,000 feet in the Louise area.

Hockenbeamer Reports on Natural Gas Effect

LOS ANGELES, Calif., Oct. 14.—A. F. Hockenbeamer, president of the Pacific Gas & Electric Co., in his report to stockholders states that gross operating expenses of all departments combined (exclusive of nonoperating income) declined $1,111,028, or 2.6 per cent. Earnings in the six months ending June 30 were 87 cents a share compared with $1.09 for the same period in 1932.

"When we introduced natural gas into our territory, beginning near the close of 1929, it was estimated that its greatest heat content (twice or more that of manufactured gas), coupled with the lower rates charged for it, would reduce our customers' bills by about 50 per cent and would correspondingly diminish our gross revenues at the rate of about $8,750,000 per annum. Considerable progress has been made * * * toward recovery of this loss in gross, and in the first six months of 1933, aided in some degree by the usually cold weather experienced in the winter months, our revenue from domestic and commercial consumers came within $223,000 of equaling the earnings from this class of business in the first half of 1929. A substantial industrial load, not previously available with artificial gas, has been built up during this four-year period, with the result that our total gas department revenue in the first half of the current year, including this industrial business, exceeded the corresponding figure in 1932 by $919,223 and was also $779,158 in excess of the gross earnings from gas sales in the first half of 1929. It should, however, be pointed out that since the introduction of natural gas our capital investment in gas facilities has increased by about $35,000,000.

"Our current financial condition is satisfactory and should enable us to supply our capital requirements for some time to come without resort to any new financing.

"In the 12 months ended June 30, 1933, accumulated surplus was drawn upon for about 5 per cent of the total dividends paid during this period. We believe this policy to have been a sound one, not only from the standpoint of maintaining our credit but also as helping to sustain public purchasing power."

H. R. TAYLOR DIES

NEW YORK, Oct. 16.—H. R. Taylor for 23 years affiliated with the Standard Oil Co. of New York, died suddenly at his home in Larchmont, N. Y. Mr. Taylor, an authority on gasoline for many years, was born in Philadelphia, 58 years ago. He later resided at New Hope, Pa., and from there moved to Larchmont.

Conditions in California Area Less Satisfactory; Crude Overproduced; Gasoline Price War

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Oct. 16.—Conditions in California took a decided turn for the worse this week due to an utter disregard for provisions of the oil code by a number of producers and refiners. Operators have failed to effect the additional curtailment necessary to bring state production down to the October quota of 455,000 bbls. per day, and marketers have been engaged in another periodic gasoline price war. Substantial excesses in crude oil production have been registered for the past several days in the Huntington Beach, Long Beach and Santa Fe Springs Fields with the result that state production of crude oil has been averaging approximately 20,000 bbls. per day in excess of the maximum allowable. The marketing situation is nearing the critical point and may possibly become more intense unless cleared up at once as the tanker Phoenix is due in the San Francisco Bay region with approximately 70,000 bbls. of East Texas gasoline, which will enter into competition with California's third structure. Up to the present moment, major companies have not reduced the price of first grade gasoline but will be obliged to do so if the differential between third grade and regular gasoline becomes too great, as this mitigates against the sale of better grades. Crude oil prices are not expected to be reduced unless the entire refined oil price structure disintegrates.

Fuel oil shipments to the Atlantic Coast for domestic consumption showed a substantial increase during the first 10 days of October as approximately 500,000 bbls. were loaded into the tankers William G. Warden, Joseph Seep, William Rockefeller, F. H. Hillman and Gulfcrest at Los Angeles Harbor. The cargoes in the first four tankers apply on purchases of the Standard Oil Co. of New Jersey, while the fuel oil in the last-named vessel is for the Gulf Oil Co. Approximately 3,000,000 bbls. of fuel oil are scheduled to be moved from California to the East Coast between now and the close of the current year, although the quantity may be substantially increased later in the year, as the Standard Oil Co. of New Jersey was not successful in contracting for the full amount desired. The Gulf, which recently purchased 500,000 bbls. of fuel oil from the Shell, is expected to lift the entire amount within the next 30 doys, as the tankers Gulfpenn and Gulfwax have just arrived in Los Angeles Harbor and will depart with full cargoes within a few days.

Future Shipments

Practically all of the 15,000,000 bbls. of fuel oil that the Standard Oil Co. of California sold to the Standard Oil Co. of New Jersey will be lifted during 1934, although several cargoes will undoubtedly be moved in 1933. Of the several tankers that have already lifted fuel oil cargoes for the East Coast, only one, the F. H. Hillman, loaded at the Standard's dock. The William G. Warden lifted her cargo of fuel oil at the General Petroleum's docks, while the Joseph Seep was loaded by the Union Oil Co. and the William Rockefeller by the Richfield Oil Co. The tanker Charles Pratt, scheduled to arrive within the next few days, will be loaded by the Western Oil & Refining Co.

The substantial committments of fuel oil made by California companies is of particular interest at present in view of the supplemental code being considered by California operators. The significance which attaches to this lies in the fact that if the supplemental code is ratified and adopted by California operators the Regional Committee will be authorized to differentiate between refinable and unrefinable crude. The desirability of such action has been quite obvious in the past as producers of heavy unrefinable crude oil have been penalized due to the inability of marketers to dispose of current production. This action is also required in order to provide producers of heavy oil with an adequate return, particularly because of the fact that most of the wells that produce heavy oil are pumping wells with a relatively small daily yield. If operators approve the supplemental code and thus permit the Regional Committee to differentiate between light and heavy oil, California marketers will be able to dispose of additional quantities of fuel oil to eastern buyers. As the situation stands at present, several California marketers would like to dispose of additional heavy oil to eastern buyers but have been somewhat reluctant due to the lack of assurance that they would be able to purchase an increased quota of heavy oil from producers if occasion demanded.

Huntington Beach

Wilshire Oil Co., by completing two splendid wells during the early part of the current week, increased its potential daily production in the Seventeenth Street town lot area of the Huntington Beach Field to 16,300 bbls. and will probably boost this figure still higher within the next few days as No. 7-A has just been completed and passed for a production test. The Wilshire's two latest completions in the town lot area were No. 18 Huntington, brought in flowing 4,830 bbls. of clean 29.1 gravity oil per day, and No. 19 Huntington, flowing 3,760 bbls. of clean 28.2 gravity oil per day. Due to litigation involving the production of oil and gas from beneath state tidelands at Huntington Beach, the Wilshire has declined to release any data as to depth at which these two wells were completed. Efforts of the company to recomplete No. 16 Huntington proved unavailing this week as the well came back into production flowing 28,000,000 feet of gas per day. This well was originally completed several weeks ago as a gas well doing 25,000,000 feet per day and was shut in. The company will redrill No. 16 Huntington in an effort to reduce the volume of gas and replace it with crude oil. It is quite probable that this well skimmed along the top of the productive zone with the result the company is getting a substantial quantity of gas but practically no oil. Wilshire's engineers have recommended that the last 400 feet of hole be redrilled in an effort to get down into the oil sand and thus eliminate a substantial portion of the undesirable gas. The Wilshire company has not yet changed its attitude with respect to the curtailment of production and is producing well over 10,000 bbls. per day at present. The company has been perfectly frank in the matter and has consistently declined to support crude oil curtailment for the reason that it is opposed to such a policy. In fairness to the Wilshire company, attention should be directed to the fact the company has observed approved marketing ethics during the past year and is, along with several other marketers, an innocent victim of the gasoline price war that has been in progress during the past week.

A number of operators in the town lot section of the Huntington Beach Field resumed drilling and production activities during the past week but are impounding the money received in case the state secures judgment and is awarded damages as a result of the pending litigation. In one or two instances the purchasers of oil have made it obligatory for the producer to impound the amount of each payment. This policy is advantageous to both buyer and seller as it protects the buyer and permits the producer to recover his proper share of production. There are still a number of operators, however, who have temporarily suspended production activities pending the outcome of litigation and another group who have shut in their wells because of the refusal of some buyers to accept delivery of this oil until its status has been definitely determined. The Termo Corp. completed No. 5 fee in the town lot area during the early part of the current week and this new well established an initial of 2,747 bbls. of exceptionally clean 25.8 gravity oil from 4,557 feet before being shut in.

The Tide Petroleum Corp. finished No. 1 Huntington on a compressor doing 906 bbls. of clean 25.7 gravity oil per day from 4,837 feet. Several additional wells are scheduled for early completion in the Seventeenth Street town lot area of the Huntington Beach Field and while commercial production should be developed, a little difficulty may possibly be encountered in disposing of current production. A group of Huntington Beach operotors has been appointed in an effort to adjudicate the difficulty arising from production of oil and gas from beneath tideland properties, and while state officials may agree to such a program because of the increased revenue that would accrue to the state, it appears quite probable that the Huntington Beach Co., Pacific Electric Railway and the Standard Oil Co. may contest such action as the wells in question must cross properties of these concerns in order to intercept the productive horizon beneath the state tidelands. Standard Oil Co. will attempt to prevent the whipstocking or artificial deviation of wells, but at the same time is in an advantageous position to also produce from the tidelands if such action is ultimately found to be legal. Up to the present the company has refrained from engaging in crooked hole drilling and will only resort to such practice when the matter is finally determined.

Richfield

One new well was listed in the Richfield district of Los Angeles Basin during the current week and while there are a number of other drilling projects under way, it will probably be another 10 days before any additional production tests are conducted. The new producer chalked up this week was the Standard Oil Co.'s No. 1 McCracken, which came in under a natural flow doing 130 bbls. of 27.1 gravity oil and 960,000 feet of gas per day. No. 1 McCracken was bottomed at 3,697 feet and finished with a 4-inch perforated liner and 3,660 feet of 2½-inch tubing. Union Oil Co. is making good footage in No. 1 Thompson & Goodwin, which is redrilled and deepened to the Breen zone, and this well should consequently be recompleted within the next 15 days. The Associated has plugged back No. 1-A Bayha from 4,750 feet to 3,846 feet and squeezed in 49 sacks of cement through perforations in the 8⅝-inch at 3,735-50 feet. Geneva Oil Co.'s No. 2 McFadden is at 4,570 feet and operators are watching the outcome of work on this well as it may possibly be completed in the Kraemer zone. St. Helens Petroleum Co. has just landed and cemented a string of 8⅝-inch in No. 1 Brown and this well, bottomed at 3,744 feet, should be given an early production test.

The Shell completed a substantial producer in the Dominguez Field of Los Angeles Basin a few days ago when No. 46 Reyes was brought in flowing 1,245 bbls. of 32.4 gravity oil and 1,770,000 feet of gas per day. This well was bottomed at 5,280 feet and finished with a 6⅝-inch combination string including 721 feet of perforated, and cemented through perforations at 4,557 feet. The Shell's next completion in the Dominguez

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Sept. 30		Sept. 23			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Fuel oil	141,364	20,195	.....	.....	1,060,666	.....
Diesel and gas oil	.....	.....	.....	.....	1,200,559	608,445
Gasoline	.....	.....	310,652	44,379	8,084,190	6,442,235
Kerosene	29,660	4,237	80,411	11,487	618,966	154,372
Foreign exports—						
Crude oil	24,903	3,272	80,389	11,484	5,674,866	6,320,130
Fuel oil	127,748	18,250	187,924	26,846	6,248,125	6,522,367
Diesel and gas oil	.....	.....	109,798	15,685	2,501,482	1,854,030
Gasoline	19,733	2,819	80,514	11,502	4,387,764	6,374,852
Kerosene	26,908	3,844	.....	.....	1,508,221	2,226,848
Naphtha distillates	.....	.....	.....	.....	.....	120,075
Coastwise-domestic—						
Crude oil	.....	.....	185,167	26,452	5,627,398	11,138,646
Fuel oil	152,862	21,837	247,326	35,332	7,658,024	9,019,341
Diesel and gas oil	23,041	3,292	14,413	2,059	889,570	979,284
Gasoline	232,737	33,248	283,364	40,481	9,669,436	11,564,366
Kerosene	4,055	579	5,668	810	153,320	132,093
Naphtha distillates	.....	.....	.....	.....	27,651	.....

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	111,819	15,974	.....	.....	511,897	483,201
Gasoline	28,713	4,102	72,858	10,408	804,548	844,423
Kerosene	.....	.....	.....	.....	482,430	75,760
Lubricants	393	56	9,175	1,311	33,934	23,829
Foreign exports—						
Crude oil	176,065	25,152	.....	.....	1,496,106	707,651
Fuel oil	233,791	33,399	.....	.....	1,274,340	798,098
Diesel and gas oil	10,807	1,544	.....	.....	835,267	519,332
Gasoline	24,238	3,463	.....	.....	3,187,310	2,879,314
Kerosene	31,520	4,503	.....	.....	841,225	768,236
Lubricants	5,102	729	.....	.....	101,472	30,094
Coastwise-domestic—						
Fuel oil	181,835	25,976	13,104	1,872	2,747,759	2,288,881
Diesel and gas oil	.....	.....	.....	.....	179,250	321,433
Gasoline	47,321	6,760	50,107	7,158	3,045,495	2,920,732
Kerosene	.....	.....	5,121	732	95,204	91,723
Lubricants	.....	.....	.....	.....	2,751	.....

Field should be No. 47 Reyes, which has just resumed drilling operations following the landing of an 11¾-inch water string at 3,878 feet. Union Oil Co. should finish No. 32 Callender and No. 23 Hellman within the next few weeks, and these two wells will be followed into production by No. 24 Hellman and No. 33 Callender, unless mechanical trouble develops in the meantime. The Republic Petroleum Co. has resumed work on No. 2 Childs and is pulling the 10-inch after plugging back from 4,288 feet to 2,996 feet preparatory to redrilling the hole. No. 5 Childs has just been rigged up and will probably be spudded in within the next few days. Sunrise Petroleum Co., failing to encounter the first or second Callender zone in No. 1 Domingues, has temporarily suspended drilling operations at 5,212 feet.

Mountain View

Mohawk Petroleum Co. has completed No. 2 Hood in the Mountain View Field of Kern County and this new well was brought in doing 330 bbls. of 28.6 gravity oil per day. Due to the relatively small initial of this well, the company is rigging up a compressor in the hope of stimulating production. No. 2 Hood was bottomed at 5,609 feet and finished with a 4½-inch liner hung on a string of drill pipe. The production of this well is rather interesting in view of the failure of No. 1 Hood to develop commercial production and its ultimate abandonment. The Mohawk has one other drilling well under way in the Mountain View Field, but this project, No. 1 Clendennen, still has some distance to go before completion as the bit has just passed the 4,400-foot level. Bankline Oil Co. has not yet drilled out the cement in No. 1 Symons following the landing of a 9⅝-inch water string at 5,887 feet, but should resume drilling operations within the next few days. This well, located almost 2 miles southeast of the Hogan Petroleum Co.'s discovery, showed a well saturated sand at 5,946 feet and appears to show exceptional promise. If commercial production is developed in No. 1 Symons, it will definitely indicate that the trend of the Mountain View Field is from northwest to southeast and lies between this well and the Hogan Petroleum Co.'s initial completion on the Wharton lease. The probability that the main portion of the Mountain View Field is located southeast of the discovery well is further evidenced by the relatively small production shown by the Mohawk Petroleum Co.'s No. 2 Hood and the rather unfavorable outlook for No. 1 Mott of the Barnsdall. The failure of No. 2 Porter Day of the Shell, an offset to the Hogan Petroleum Co.'s No. 1 Wharton, to show substantial production offers additional evidence that the main portion of the field lies between No. 1 Symons of the Bankline and the discovery well, No. 1 Wharton of the Hogan Petroleum Co. The Shell has resumed work on No. 1 Porter Day, which is really the discovery well in the Mountain View Field, and will attempt to recomplete it in the upper zone. No. 1 Porter Day showed an initial daily production a few years ago of approximately 1,500 bbls., but the Shell instead of finishing it in the Wharton zone decided to carry it on down as a deep test. The company subsequently plugged back and attempted to complete it in the present productive Wharton zone, but was unsuccessful. Due to the inability of the Shell to recomplete this well, the Hogan Petroleum Co. is generally credited as having discovered the Mountain View Field as its No. 1 Wharton was the first well in the field to show commercial production.

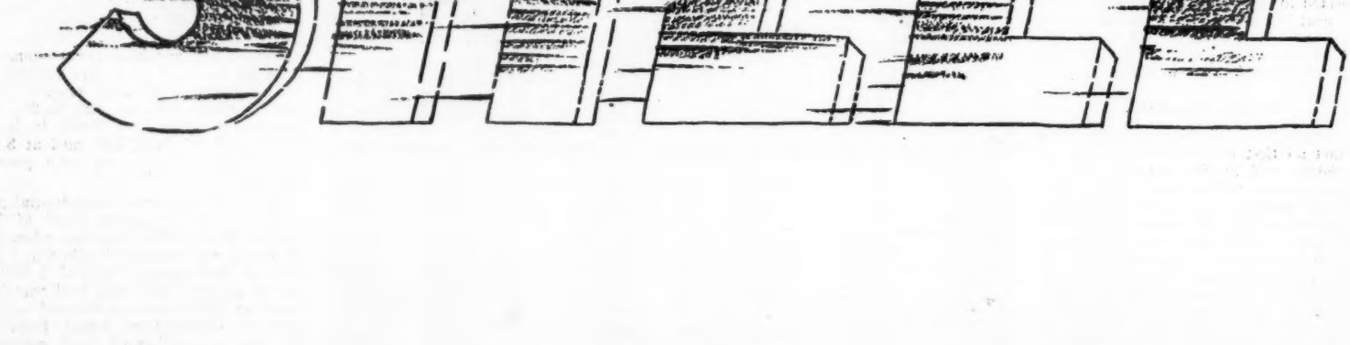
Montebello

Universal Consolidated Oil Co. has definitely determined the fact that the water which showed in the initial completion of its deep test, No. 1 Cruz, was due to a defective water shutoff. As evidence of this, the company cleaned out the hole to bottom, 7,010 feet, and recompleted the well during the early part of the week flowing 752 bbls. of exceptionally clean 37.4 gravity oil per day through a three-quarter inch bean. Universal Consolidated, after plugging back this hole several weeks ago, has been drilling out by stages in order to determine whether the water which accompanied the initial flow was formation water or due to a defective water shutoff. It is quite evident that this difficulty was due entirely to mechanical conditions because, after a recement job on the water string and the hole cleaned out to bottom, the production of the well is practically clean. The status of the Universal Consolidated's No. 1 Cruz greatly enhances the production possibilities in the eastern end of the Montebello Field and justifies the drilling of new wells even farther out on the structure. The Universal recently spudded in No. 1 Repetto and is rigging up rotary equipment preparatory to early work on No. 1 Alvitre. All three of these wells are located in the extreme eastern part of the field and the properties in question were at one time held by a major California company. Operators in the Montebello Field will not be permitted to produce from the deep Cruz zone until they agree on a definite development program and it is subsequently approved by the Regional Committee or the Central Proration Committee. The deep zone in this field was not given a daily quota for the month of October and consequently obliged to suspend production activities on No. 1 Cruz immediately upon completion of the present production test. This well has been on intermittent production for several weeks due to extenuating circumstances attributed to the fact that the company was pioneering a new deep zone and was endeavoring to locate the source of water which originally showed up in the production of the well.

General Petroleum completed No. 231 Santa Fe in the Santa Fe Springs Field during the early part of the current week and this new well was brought in flowing 506 bbls. of 32.9 gravity oil per day. No. 231 Santa Fe, after standing idle for almost a year, was deepened to 4,852 feet last month and finished for the first time after the hole had been plugged back to the Meyer zone at 4,740 feet. There

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.	T.	R.	Depth	Status—
Palm Ridge Oil Co., No. 1 Palms, Los Angeles Co.	2-	2-15		7,150	suspended
Pacific Gulf, No. 1 Athens, Los Angeles Co.	19-	3-13		6,034	suspended
Pacific Dev. Co., No. 1 Wilmington, Los Angeles Co.	16-	3-13		901	cemented
Wilmington Oil Co., No. 1 Wilmington, Los Angeles Co.	28-	4-13		4,516	suspended
Sunrise Pet. Co., No. 1 Domingues, Los Angeles Co.	3-	4-13		5,212	suspended
Baldwin Hills Pet., No. 2 Inglewood, Los Angeles Co.	17-	2-14		mtl.	building rig
Oakes & Mead, No. 1 Lynwood, Los Angeles Co.	31-	2-12		4,940	redrilling
Celito Oil Co., No. 1 Monterey Park, Los Angeles Co.	25-	1-12		5,319	reaming
Community Oil Co., No. 1 Montebello, Los Angeles Co.	34-	1-11		5,281	suspended
Universal Consd., No. 2 Montebello, Los Angeles Co.	5-	2-11		1,751	sd. sh. drilling
Universal Consd., No. 3 Montebello, Los Angeles Co.	5-	2-11		rig	rigging up
Nance, M. K., No. 1 Montebello, Los Angeles Co.	6-	2-11		rig	suspended
Signal Pet., No. 1 Fuente, Los Angeles Co.	14-	2-10		4,908	plugging back
Guiberson, S. A., Jr., No. 1 Sunset Beach, Los Angeles Co.	16-	5-11		129	sd. drilling
Willetts Pet., No. 1 Saugus, Los Angeles Co.	35-	5-16		2,074	suspended
Alpha Oil Co., No. 1 Calabasas, Los Angeles Co.	22-	1-18		1,317	suspended
Marble, Willard, No. 1 Van Nuys, Los Angeles Co.	6-	2-16		2,760	suspended
Plymouth Oil Co., No. 1 West Coyote, Los Angeles Co.	24-	3-11		4,800	hd. sd. drilling
Vaqueros Major Oil Co., No. 1 Huntington, Orange Co.	tideland			rig	rigging up
Nuoil Co., No. 1 Newport, Orange Co.	29-	6-10		5,060	br. sh. drilling
Mineral Exploration, No. 1 Capistrano, Orange Co.	8-	8-	7	4,302	suspended
Saddleback Oil Co., No. 1 El Tora, Orange Co.	3-	6-	7	80	suspended
Placentia Dev. Co., No. 1 Placentia, Orange Co.	31-	3-	9	3,000	sd. sh. drilling
Brown, W. F., No. 1 Atwood, Orange Co.	26-	3-	9	rig	suspended
Rubens, Sy, No. 1 Atwood, Orange Co.	19-	3-	9	rig	rigging up
Bartholomae Oil Co., No. 1 Coyote, Orange Co.	22-	3-10		rig	suspended
Spindle Top Oil Co., No. 1 Salton Sea, Riverside Co.	25-	7-10		3,590	suspended
Great American Pet., No. 1 Chino, San Bernardino Co.	18-	2-	8	2,660	milling
Great American Pet., No. 2 Chino, San Bernardino Co.	18-	2-	8	1,596	cleaning out
McCarthy, C. F., No. 1 Chino, San Bernardino Co.	14-	3-	6	803	sd. sh. drilling



are two other drilling wells under way in the Santa Fe Springs Field at present and both of them, No. 16 Farwell of the Union Oil Co., and No. 28 Slusher of the Shell, should be tanking oil within another 30 days. In the Inglewood Field of Los Angeles Basin, the Baldwin Hills Syndicate is building rig for another well to be drilled on the Sentous lease in Section 17-2-14. The first hole drilled on this property failed to get production and was suspended several months ago. The Sentous lease is located around the edge of the structure and while the intentions of the company are not known with respect to whipstocking operations, this well could be deviated sufficiently to intercept the second, or lower, zones.

Kettleman Hills

Two wells were completed in the Kettleman North Dome Field during the current week, although one of these projects was a recompletion. This was No. 2 King of the Union Oil Co., which was returned to production flowing 625 bbls. of 34.6 gravity oil and 3,210,000 feet of natural gas per day after the hole had been reconditioned and cleaned out to bottom, at 8,500 feet. In recompleting this well, the Union circulated oil and gas from No. 3 King down between the casing and tubing of No. 2 King. This method of blowing in new wells has not become a general practice in California, although the Milham Exploration Co. has adopted the practice of blowing in its gas wells in the Buttonwillow gas field by introducing gas from a producing well into the potential producer between the tubing and casing. This eliminates the necessity of swabbing operations and increases the safety factor as the wells are obviously under control at all times.

The Kettleman North Dome Association completed No. 83-30-J in the Kettleman North Dome Field a few days ago and this new well is credited with an initial daily production of 5,440 bbls. of 33.3 gravity oil and 3,400,000 feet of gas from 8,698 feet, the hole having been finished with a 4¾-inch liner including 1,073 feet of perforated. Kenda has several additional potential producers under way in the North Dome and should consequently finish three or four new wells before the close of the current year. Approval of the unit plan covering development of the Kettleman Middle Dome by Secretary Ickes paves the way for additional drilling in that field. Development of the Middle Dome does not contemplate unified drilling or general unitization of work as the plan approved by operators in this field deviates somewhat from the unit operation in effect in the Kettleman North Dome Field. Operators in the Middle Dome will function more like a corporation in that no heavy assessments will be levied to sustain consistent development. Under the present plan, the Standard and Petroleum Securities will be permitted to drill one new well each in order to liquidate drilling costs, after which the wells will become the property of the association. Operators are to be commended on the adoption of this program as this method will not impose heavy burdens on the Bolsa Chica and other concerns whose capital is relatively limited. The Bolsa Chica Oil Co., by the way, is the second largest holder of proved acreage in the Kettleman Middle Dome, being surpassed only by the Standard Oil Co. The Bolsa Chica's 300 acres, located within the inner line, is the equivalent of 25.64 per cent of the total amount involved. The Standard's acreage, located within the red line, approximates 580 acres and is the equivalent of 49.57 per cent. The Petroleum Securities holds 150 acres of proved oil land, or 12.82 per cent of the total amount, while the Shell is credited with 140 acres within the red line and has an interest of 11.97 per cent. Due to the limited amount of development undertaken in the Middle Dome up to the present, the outer limits of production are more or less problematical, but since cognizance has been taken of this fact, the participating acre-

(Continued on Page 68)

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.	T.	R.	Depth	Status—
Monterey Expl. Co., No. 1 Point Concepcion, S. Barbara Co.	33-	5-	33	3,653	redrilling
Lincoln Drlg. Co., No. 3 Summerland, Santa Barbara Co...	21-	4-	26	1,600	sd. sh. drilling
Meganos Oil Co., No. 1 Purisima, Santa Barbara Co.	28-	8-	34	2,861	br. sh. driling
Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-	10-	27	3,670	gr. sd. drilling
Woodrow Pet., No. 1 Rincon, Ventura Co.	4-	3-	24	7,602	repair pipe
Bardeen Pet., No. 1 Fillmore, Ventura Co.	13-	4-	19	3,230	pump 50 B/D
Hancock Oil Co., No. 1 Fillmore, Ventura Co.	13-	4-	19	2,373	will deepen
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1-	4-	19	mtl.	building rig
Driggs Pet., No. 1 South Mountain, Ventura Co.	17-	3-	20	1,514	sd. sh. drilling
Kneiper & Atha, No. 1 Bardsdale, Ventura Co.	7-	3-	19	1,100	gr. sd. driling
Williamson & Donaher, No. 1 Simi, Ventura Co.	36-	3-	18	801	suspended
Dabney, H. R., No. 1 Simi, Ventura Co.	22-	2-	18	1,000	suspended
C.C.M.O., No. 3-A Miguelito, Ventura Co.	23-	3-	24	4,166	suspended
Midlands Pet., No. 1 Ojai, Ventura Co.	9-	3-	23	7,841	redrilling
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co. ..	20-	4-	21	2,198	suspended
Kirk, W. A., No. 1 Sulphur Mountain, Ventura Co.	21-	4-	21	900	hd. sd. drilling
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22-	4-	21	1,570	br. sh. driling
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22-	3-	20	5,000	suspended
International Oil Developers, No. 1 Conejo, Ventura Co...	33-	2-	20	2,843	hd. sd. driling
Hub Pet. Co., No. 1 Gould Hills, Kern Co.	22-	29-	21	6,840	suspended
Purman, T. H., No. 2 Gould Hills, Kern Co.	27-	29-	21	335	suspended
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-	28-	20	4,963	gr. sh. drilling
General Pet., No. 1 Belridge, Kern Co.	30-	28-	21	8,981	br. sh. drilling
Cumberland Oil Co., No. 2 Devil's Den, Kern Co.	17-	26-	18	3,270	suspended
Lincoln Pet., No. 1 Devil's Den, Kern Co.	10-	25-	18	2,172	suspended
Hanna, Tom, No. 1 Devil's Den, Kern Co.	25-	25-	18	3,516	suspended
Pyramid Hills Oil Co., No. 1 Devil's Den, Kern Co.	24-	25-	18	4,140	cemented
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-	26-	19	3,170	suspended
Associated, No. 1 Lost Hills, Kern Co.	2-	26-	20	6,041	reaming
Howells Bros., No. 1 Round Mountain, Kern Co.	32-	28-	29	1,260	cleaning out
Kena Pet. Co., No. 1 Lerdo, Kern Co.	14-	29-	27	4,531	suspended
Ohio Oil Co., No. 1 Buena Vista Lake, Kern Co.	31-	31-	26	rig	rigging up
Caravel Pet. Co., No. 1 Edison, Kern Co.	19-	30-	30	1,801	suspended
Union Oil Co., No. 1 Union Avenue, Kern Co.	15-	30-	28	2,116	sd. sh. drilling
Alta Oil Co., No. 1 Union Avenue, Kern Co.	6-	30-	28	1,912	sd. sh. drilling
Shell Oil Co., No. 2 Mountain View, Kern Co.	29-	30-	29	5,838	flow 55 B/D
Hogan Pet. Co., No. 2 Mountain View, Kern Co.	29-	30-	29	5,300	sd. sh. drilling
Bankline Oil Co., No. 1 Mountain View, Kern Co.	4-	31-	29	5,950	cemented
Barnsdall Oil Co., No. 1 Mountain View, Kern Co.	31-	30-	29	6,249	sd. sh. drilling
Long Beach Pet., No. 1 Mountain View, Kern Co.	29-	30-	29	5,500	fish D/P
Mohawk Pet., No. 1 Mountain View, Kern Co.	30-	30-	29	5,958	abandoned
Mohawk Pet., No. 2 Mountain View, Kern Co.	30-	30-	29	5,609	325 B/D
Mohawk Pet., No. 3 Mountain View, Kern Co.	30-	30-	29	4,400	sd. sh. drilling
Comanche Oil Co., No. 1 Comanche, Kern Co.	15-	32-	29	rig	suspended
Badger Oil Co., No. 1 Wheeler Ridge, Kern Co.	31-	11-	19	4,483	suspended
Gatton & Luethe, No. 1 Madera, Madera Co.	32-	10-	17	3,020	W.S.O. test
Russ Oil Synd., No. 1 Kingsburg, Fresno Co.	20-	12-	21	2,980	gr. sh. drilling
Bergman, Harry, No. 1 Kingsburg, Fresno Co.	12-	12-	21	4,230	hd. sh. drilling
Graham & Loftus, No. 1 Raisin City, Fresno Co.	20-	15-	18	5,906	suspended
Emerich Oil Co., No. 1 Mendota, Fresno Co.	35-	13-	13	3,820	suspended
Western Gulf, No. 1 S. P., Fresno Co.	3-	17-	15	5,786	sd. sh. drilling
Schmeizer, R. F., well No. 1, Fresno Co.	36-	16-	14	rig	suspended
Hogan Pet. Co., No. 1 Joaquin Ridge, Fresno Co.	28-	20-	16	6,605	suspended
Superior Oil Co., No. 1 Jacalitos, Fresno Co.	6-	22-	16	5,493	sd. sh. drilling
Kent & McDonald, No. 1 Carrizo Plains, S. Luis Obispo Co.	3-	32-	22	3,830	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-	27-	11	4,191	suspended
Guess, E. B., No. 1 Corcoran, Kings Co.	7-	21-	21	6,197	suspended
Brown, A. M., well No. 3, Kings Co.	10-	23-	19	1,205	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-	23-	17	6,873	suspended
Dudley Dome Oil Co., well No. 2, Kings Co.	9-	23-	20	rig	rigging up
Magee & Stone, No. 2 Alpaugh, Kings Co.	33-	21-	22	3,149	suspended
Cardinal Oil Co., No. 1 Los Banos, Merced Co.	26-	10-	9	rig	rigged up
Na-Pa Oil Co., No. 1 Griffith, Napa Co.	7-	8-	3	3,750	suspended
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	5-	2-	10	4,815	redrilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo County	23-	12-	3	5,350	gr. sd. drilling
Buttes Oilfields Co., No. 1 Marysville, Sutter Co.	35-	16-	1	2,731	gas, shut in
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	34-	16-	1	3,708	sd. sh. drilling
Tehama Pet. Co., well No. 1, Glenn Co.	4-	22-	5	4,696	cemented

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VALVES-PIPE FITTINGS-FIRE HYDRANTS

Michigan Potential Is Now Over 75,000 Barrels; Seven Wells Add 17,000 Barrels in Week

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Oct. 16.—Potential daily production of Michigan fields was boosted over 75,000 bbls. this week when seven new wells added more than 17,000 bbls. initial within 24 hours in the Porter area setting a new weekly record for the State.

Included with the seven new Porter wells was Pure Oil Co.'s No. 2 F. W. Howard, NW NW SE, Section 17-13n-1w, completed as the second largest well in the State with an initial flow from the Dundee pay sands of about 10,000 bbls. a day. It made as high as 230 bbls. in 30 minutes threatening the record set recently in Pure's No. 1 Whitney.

None of these wells will be allowed to produce for more than 24 hours and then only if field tankage is sufficient to hold the crude, under restrictions against bringing in new wells except forced offsets recently placed in effect by the new Michigan oil regulatory board. To comply with the new regulations some operators also were shutting in other wells on the same leases to allow them to flow some of the new oil into the pipe lines in order to get an accurate initial on the new producers.

The Porter Township potential is now estimated at more than 45,000 bbls. with a half dozen inside wells due to be drilled in during the coming week with the probability that the Porter potential then will exceed 60,000 bbls. a day. The proration committee, which last week placed a new graduated proration scale in effect, anticipates that the Porter output will be held to about 18,000 bbls. a day by this schedule.

Vernon Township with a potential of about 3,000 bbls. a day is expected to be held to 2,500 bbls. with the rest of the State's allowable of 30,000 bbls. coming from the old Chippewa-Greendale Pool, original producing area near Mount Pleasant, the Leaton Pool, Muskegon, Saginaw, Oceana and one well in Ogemaw County which have only a few scattered wells making more than the exemption of 100 bbls. a day.

No new pipe line connections are to be made in the Porter Pool for at least 15 days after which a new proration schedule is expected to be announced including any new wells completed during the month.

Completions

The second largest completion of the week was Gordon Oil Co.'s No. 2 Good, SE NE SE, Section 17, which made as high as 150 bbls. an hour and is rated at 3,500 bbls. initial.

Pure Oil Co. brought in two wells making 2,000 and 1,500 bbls. initial, respectively. The larger was No. 2 A. C. Wyant, SW NW SW, Section 16, which made about 75 bbls. an hour, and the other was No. 2 George Whitney, SW NE SE, Section 17. Davis Oil Co.'s No. 2 Nitzke, NW NE SE, Section 21, came in for about 500 bbls. and was to be drilled deeper. Fred Turner's No. 1 Hock, NE SE NE, Section 21, made 250 bbls. initial and will be drilled deeper, while Pure's No. 7 Mina C. Naramore, SE SE SW, Section 15, was the smallest of the seven new producers making only 60 bbls. initial.

The Vernon Township Pool was extended southeast by Atha Oil Co. and Columbia Oil & Gas Co.'s No. 1 Van Connant, SW SW SE, Section 25, which made about 10 bbls. initial but was expected to make a good pumper after acid treatment.

Oceana Field

James Flannagan's No. 4 E. Mitchell, NE SE, Section 36-15n-17w, Hart Township, Oceana County, was brought in as the sixth commercial producer in the new western Michigan Field with an estimated initial of 250 bbls. a day. Oil sands of the upper Traverse formation were encountered at 1,897-99 feet. Three other wells, No. 5 on the same lease, and two of H. C. Nelson's wells on the A. Doolittle and Anna Copenhaven leases directly north of the Mitchell, are drilling.

More than 20 other wells were nearing completion as the week closed, several cased and about to drill into the Dundee, several at the casing point and others drilling in or below the Traverse limestone in Porter, Vernon and Greendale Townships.

Four wells in Porter Township were drilling in. They were: Gordon Oil Co. and Ed Stewart's No. 2 Carter, NE NW NE, Section 21; George Hanner's No. 1 Methodist Church, SE SW NW, Section 17, within a stone's throw of the big Pure-Howard's No. 2 brought in this week for 10,000 bbls.; Pure Oil Co.'s No. 4 Hill, NW SW NW, Section 18, and Gordon Oil Co.'s No. 2 Good, SE NE SE, Section 17.

Two wells cased above the Dundee and ready to drill in were Sun Oil Co.'s No. 2 Miller, NE SE SW, Section 16, and J. Mark Harvey's No. 1 Messenger, NE NE, Section 36, both in Porter Township. Two other wells casing on top of the Dundee were Strange Oil & Gas Co.'s No. 3 Walley, SE SW SE, Section 17, and Sun Oil Co.'s No. 3 Miller, SW SE SW, Section 16.

Two Gordon Oil Co. wells, No. 1 Diebel, SE SE NW, and No. 2 Diebel, both in Section 18, neared the casing point while five others in Porter Township were drilling in the Traverse: George Hanner's No. 2 Hathaway, NE SE NE, Section 17; Charles Smith's No. 2 Buschre, SE SW NE, Section 22; Stork Oil Co.'s No. 2 Baxter, SE SW NE, Section 22, and the same company's No. 2 Hill, NW SE NE, Section 22, and W. J. Wilson's No. 1 Hodge, NE NW SW, Section 18.

Vernon Township

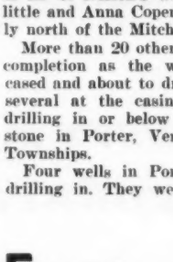
Four wells in Vernon Township, Isabella County, also are nearing the Dundee: Mellon and Pollock Oil Co.'s No. 2 House, NE NE NW, Section 26, and No. 4 Stough, NW SW SE, Section 23; Mammoth Petroleum Co.'s No. 3 Verette, SW

(Continued on Next Page)

Fourteen Completions in Central West Field; Three Producers Reported in Kentucky

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Oct. 16.—During the week the Lima Field accounted for two new wells, both in Wyandot County. Newcomer and others' test on the Albert Reber farm, Section 1, Pitt Township, was dry at a depth of 1,913 feet. Same parties are drilling on the W. H. Castanein farm, Section 11, same township. In Crane Township, same county, Ferdell and others' test on the Mary E. Sampson farm, Section 20, was a dry hole at 1,322 feet. In the same township three other wells are scheduled for completion within a few days: Keiner and others' No. 5 on the Louisa Brandt farm, Section 34; Jones & Coyle's No. 6 Margaret Brillhardt farm, Section 28; and Upper Sandusky Oil & Gas Co.'s No. 6 on the O. J. Weiker farm, Section 29. Pitt Oil & Gas Co.'s No. 1 on the A. E. Myers farm, Section 3, same township, is shut down at 1,347 feet. Upper Sandusky Oil & Gas Co. is drilling No. 2 on the Mary Loverick farm, Section 29, same township.



Simms Oil & Gas Co. is drilling below 300 feet on the Douglas Poe farm, Section 4, Roundhead Township, Hardin County.

Keiner and others are drilling close to the pay sand in their No. 2 on the Charles Dumit farm, Section 24, Liberty Township, Seneca County, in the Tiffin Field.

John Doblinger is drilling No. 2 on the Dan Knauss farm, in Monclova Township, Lucas County.

Montgomery and others are reported drilling at 1,330 feet in No. 2 on the H. F. Hettrick farm, Section 31, Rice Township, Sandusky County.

CENTRAL OHIO

The Central Ohio Field is holding its own in field work, there being 14 completions during the week and numerous wells nearing the pay sand for oil or gas. The best oil completion was drilled by the Upham Gas Co., on the V. L. Smith farm, Section 14, Fallsburg Township, Licking County, which produced an initial of 80 bbls. from 2,974 to 3,030 feet. Blue Rock Oil Co.'s No. 5 on the W. D. Booth farm, Section 14, same township, is drilling below 2,850 feet. Emerald Petroleum has a rig in for No. 2 on the Calvin Mosholder farm, same section. No. 2 on the O. A. Kreager farm, Section 10, Franklin Township, same county, is drilling around 1,850 feet.

In Medina County, the O. K. Oil & Gas Co.'s No. 41 on the Ross farm, Lot 7, Chatham Township, was dry at 425 feet. D. A. Lake's No. 6 on the P. and A. Weaver farm, in Litchfield Township, same county, was dry in the Berea sand at 321 feet.

In Ashland County the Ohio Fuel Gas Co.'s No. 2-4,714 on the Mary V. Sharick farm, Section 21, Orange Township, is a gas well at 2,560 feet. In Mohican Township, same county, Moore and others are drilling No. 7 on the George W. Black farm, in Lot 34.

In Knox County, Ohio Fuel Gas Co.'s No. 1 on the Briggs farm, in Union Township, is reported at 5 bbls. In Jackson Township, same county, Pure Oil Co.'s No. 2 on the J. D. Reed farm is reported a dry hole.

In Tuscarawas County, Gordon Oil Co.'s No. 5 on the Dolly Huffman farm, Lot 25, is reported good for 15 bbls. at 3,110 feet. Hopewell Oil & Gas Co. is drilling on the C. M. Hussey farm, Lot 22, same township.

In Portage County, Johnson and others' test on the Gail King farm, Lot 39, Charlestown Township, was a dry hole below 4,340 feet. Brendel Producing Co. is drilling on the W. J. Lynn farm, Lot 50, Deerfield Township, same county.

Stark County

In Stark County, White and others' No. 1 on the Jacob Isler farm, Section 25, Perry Township, is a gas well at a total depth of 4,592 feet. In Lake Township, Brendel Producing Co. got a dry hole on the D. Schlaback farm, Section 25. In Plain Township, same county, Stolz and others' No. 1 on the Lynhurst Addition, in Section 17, is a gas well at 4,550 feet. Ohio Fuel Gas Co.'s No. 2-5,742, on the Mary E. Kuntze farm, Sections 18-19, same township, is a gas well at 4,556 feet. Brendel Producing Co.'s No. 1 on the Valentine L. Ney farm, Section 10, same township, is a gas well at 4,553 feet. Hoover Development is drilling No. 1 on its own property, in Section 8, Plain Township. East Ohio Gas Co. is drilling No. 1 on the Frank M. Deems farm, Section 18, same township. Same company made a location for No. 1 on the R. D. Staudt farm, Section 17. Cunningham Natural Gas Co. is drilling No. 2 on the Levi A. Stoner farm, Section 17, and drilling No. 1 on the Catherine Donnenworth farm, Section 22. White and others have a rig in for No. 1 on the K. Emil Kiesling farm, Section 18, and Brendel Producing Co. has a rig up for No. 2 on the James H. McDowell farm, Section 15, same township. In Jackson Township, Ohio Fuel Gas Co. has a rig in for No. 2-5,762 on the Lee Miday farm, Section 2, and No. 1-5,766 on the S. E. Carlson farm, Section 22. East Ohio Gas Co. made a location on the H. and R. Konen farm, Section 22, Jackson Township.

In Belmont County, Somerset Township, Robert Lewis drilled in a gas well in No. 2 on the George Butler farm, Section 32. Peters and others are drilling No. 1 on the Anthony J. Burkhart farm, Section 36, same township.

In Guernsey County, Wilber Keith is drilling on the Ralph Foraker farm, Section 20, Willis Township, and J. T. Roach is drilling No. 2 on the Jennie Rose farm, same section and township. Preston Oil Co. has a rig up for No. 6 on the J. L. Alloway farm, Section 10, Westland Township.

In Muskingum County, the Mid-East Gas Co. is drilling No. 3 on the Ludivin farm, Section 14, Muskingum Township, and Atha Oil Co. is drilling on the Grover C. Wilson farm, in the Fourth quarter of Washington Township.

In Summitt County the East Ohio Gas

Co. will drill from the Newburg formation to the Clinton lime in No. 1 on the F. N. Steiner farm, Section 18, Green Township, in hopes of finding a worthwhile producer of some kind.

INDIANA

Fourteen completions were reported from the Indiana fields, of which seven were oil producers with an initial of 265 bbls., one gas well and six dry holes. The best producer was John L. Drake and others' No. 5 on the J. M. Effinger No. 2 farm, NW Section 33, Center Township, Vanderburg County, with an initial of 100 bbls. No. 6 on the J. M. Effinger No. 1 farm, in the same quarter section, is drilling. Knapp & Wood's No. 3 on the Southern Indiana Gas & Electric righ of way, NE Section 33, same township, produced an initial of 80 bbls. John L. Drake & Co.'s No. 2 on the Evansville Gun Club property, NW Section 33, same township, produced 40 bbls. initial, and Mann & Huber's No. 1 on the Philip Niedhammer farm, Section 20, same township, produced 10 bbls. initial. Blosser & Coleman's No. 1 on the H. G. Campbell farm, NE Section 17, was dry. In Scott Township, same county, P. E. Tichenour drilled a dry hole on his fee property, Section 17. McClurkin and others are drilling No. 1 on the W. P. Woods farm, SE Section 16, same township.

In Gibson County, Knox Engineering Corp. is drilling No. 3 on the L. Gudgel farm, SE Section 22, Columbia Township, and the Wabash Public Service Corp. is drilling No. 2 on the R. M. Oynett farm, NE Section 22, same township.

In Pike County, Charles C. Taliaferro, Jr., drilled in a 5-bbl. pumper on the Anna Bradfield farm, SE Section 7, Washington Township. Bell, Trussler and others are drilling No. 6 on the Craig heirs farm, NW Section 17, same township. In Jefferson Township, same county, Indiana Southwestern Gas Corp. had a dry hole at 1,154 feet.

In Perry County, Auburn Stinson's test on the Edward Lorch farm, Section 12, Huff Township, produced 5 bbls., and Roger Williams and others are drilling No. 1 on the Edward Lorch farm, also in Section 12, same township. H. C. Darby and others are drilling on the James Sweet farm, NW Section 22, Union Township, same county. In Clark Township, Bankable Oil Co. and N. N. Smith's No. 2 on the J. Leclier farm, NE Section 30, had an initial of 25 bbls. Anderson Creek Oil & Gas Co. is drilling No. 5 on the Alvin Franchville farm, same quarter section, and the Bankable Oil Co. and N. N. Smith are drilling No. 3 on the J. Leclier farm, NE Section 30, Clark Township. In Anderson Township, same county, Porter, Bugg and others' No. 1 on the C. Splater heirs farm, NE Section 32, was a dry hole. Charles C. Taliaferro, Jr., drilled a dry hole on the Gus Goffnit farm, NW Section 11, same township, and Charles Hyle's test on the Brunner farm, same township, was dry. In Tobin Township, Moorhead & Gard are drilling No. 2 on the J. A. Cook farm, and in Oil Township, Obert Oil Co. is drilling No. 1 on the Frank B. Kelley farm, Section 26.

In Jay County, N. E. Masters and others' test on the George Cring farm, NW Section 25, Wayne Township, was dry and the same parties are drilling No. 2 on the Bailey estate, NE same township.

In Porter County, V. S. Hollingsworth and others are drilling on the Kenneth Wolf farm, Section 26, Portage Township.

In Kosciusko County, Kosana Oil Corp. is drilling on the W. O. Wehrling farm, NE Section 10, Van Buren Township.

In Stark County, Henry A. Joern is shut down at 200 feet on the Wanda M. Joern farm, Section 26, Davis Township.

In Greene County, A. R. Morris and others are shut down at 600 feet in No. 2 on the H. B. Brown farm, Section 9, Washington Township, near the town of Lyons.

Knightstown Natural Gas Co. is drilling No. 2 on the Marshall Wales farm, in Hancock County.

ILLINOIS

There were no completions reported for the week in Illinois.

KENTUCKY

Three producers were reported in Ohio County, Kentucky. The best was Ohio Oil Co.'s No. 7 on the A. J. Phister 107 acres, in the Maddox Pool, with an initial of 50 bbls. from the Barlow sand. G. W. Stewart and others' No. 3 on the E. C. Dunn farm, in the Newton Pool, had an initial of 40 bbls. from the Jett sand. S. R. Nigh and others' No. 21 well, 2,200 feet from the south line and 1,000 feet from the west line of the A. P. Kelley 340-acre farm, in the Kelley Pool, produced 14 bbls. from the Barlow sand.

TENNESSEE

A new oil development is reported in western Tennessee, near the Tennessee River in Decatur County, where a test is to be made 375 feet from a test made in 1929 by the Chester County Oil Co. which was said to have passed up a showing in a 14-foot sand at a depth of 1,433 feet. The new concern is headed by Paul Steinberger of Tulsa, assisted by Mel Pierce, formerly of Tulsa, now of Memphis and Miami, Fla.

The test is being made on the Montgomery tract and is known as Paul Steinberger's No. 1 Montgomery. It was spudded October 4 and 57 feet was made on the first day, quicksand was encountered at about 60 feet and casing is being set below the quicksand. A special drilling machine and an 84-foot steel derrick is being used.

Michigan Fields

(Continued from Preceding Page)

SE SE, Section 23 and Templemayr and Tope's No. 1 Reakes, SE SW NW, Section 15, while Gordon Oil Co.'s No. 1 McDonald, NW NW SE, Section 25, is in the Traverse.

Michigan Producers & Refiners' No. 1 Bond heirs, Section 14, Greendale Township, Midland County, was shut down on the Dundee, while Theodore Oil Co.'s No. 3 Stead, in Section 3, was drilling in the Traverse.

Leaton Field

Three tests are active in the Leaton Pool of Denver Township, Isabella County. Michigan Gas & Oil Co. is drilling No. 4 and No. 5 on the Marthey lease, Section 19, while Hirzel-Leland's No. 1 Roberts, Section 30, is drilling after landing drive pipe.

Wildcat Development

H. C. Nelson's No. 1 Spittler, in Section 11, Austin Township, Mecosta County, about half a mile north of the discovery gas well, is preparing to drill in after changing from rotary to cable tools.

Two tests of particular interest are drilling in Montcalm County, 30 miles southwest of Mount Pleasant. They are the Daily Oil Corp.'s No. 1 Christensen, Section 10, Home Township, and W. J. Wilson, trustee's No. 1 Beach, Section 17, Richland Township. Dapar Oil Corp.'s No. 1 Tedam, Section 5, Emerson Township, is the only active test in Gratiot County.

Ogemaw County

Three Ogemaw County tests are drilling with a fourth ready to start. A considerable play is anticipated before the close of the year. A. R. Nelson's No. 1 Nelson, NE NE SE Section 33, West Branch Township, George Elliott's No. 1 Mier, NW SW SW Section 22, same township, and Alvin Webber's No. 2 Wilcox, NW NE NE Section 34, also West Branch Township, are drilling. C. A. Perry's No. 1 Wobig heirs, SW SW NE Section 6, Mills Township, is ready to spud with two others rigging up or moving in: Theodore Oil Co.'s No. 1 Country Club, SE SW SE Section 30, West Branch, and W. J. Sovereign's No. 1 Griffin, NW NW SW Section 29, West Branch Township.

The new play is centered about Alvin Webber's No. 1 Wilcox, in Section 34,

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West Branch Township, which was brought in with an initial of 380 bbls. a day in the Upper Traverse at 1,725 feet several months ago. The discovery is still making better than 100 bbls. a day.

Development in Ogemaw is particularly attractive because of the lesser total depth, a comparatively lesser drift of about 200 feet greatly reducing drilling costs compared with areas near Mount Pleasant.

The first of eight new permits issued this week by the State Conservation Department was for W. J. Sovereign's No. 1 Ora Carroll, SW SW NW Section 29-22n-2e, West Branch Township, Ogemaw County.

Two new permits of special interest this week were issued for wildcats to be drilled in Thomaston and Fremont Townships of Saginaw County. The former will be drilled by W. T. McKenna, of Detroit, on the Ed Rust lease, SW SW SW Section 2-12n-3e. It is planned to carry the wells to the Dundee formation. Mr. McKenna is associated in this test with D. A. Burrows, of Mount Pleasant, a former operator in Southwest fields. No. 1 Rust will be the first of several tests to be drilled on a block of several thousand acres in Thomaston, Richland and Saginaw Townships, Saginaw County. The territory lies between the Porter Township area and the old Saginaw Field.

Alex Jeffrey, of Saginaw, was granted a permit to drill No. 1 John Hubbell, NE NE SE Section 7-11n-2e, Fremont Township, Saginaw County.

James M. Taggart and others, of Big Rapids, having obtained state and city permits to supply this central Michigan community with natural gas, have obtained a permit for their No. 3 well on the Robert S. Fish lease, C SE SE Section 4-14n-9w, Austin Township, Mecosta County, for another prospective gasser in the Michigan series.

One Porter and three Vernon Township permits also were issued: McClanahan Oil Co.'s No. 1 Howard S. Northrup, NE NE SW Section 20-13n-1w, Porter Township; Meridian Oil & Gas Co.'s No. 2 George Woods, S half NW Section 22-16n-4w; same company's No. 3, NW Section 22, and Mellon-Pollock Oil Co.'s No. 4 John Brief and others, N half SW Section 22, Vernon Township.

Muskegon Oil Corp.'s wildcat on the N. Lieffers farm in Section 9, Ravenna Township, Muskegon County, drilled into the upper Traverse limestone without success, will be carried to the lower Traverse. It was located NW NE SW Section 22-9n-14w. It is the corporation's seventh test in the past two years in an attempt to open a new oil or gas field in that county.

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Increasing Activity in the Eastern Fields; Fifteen Completions, 11 Gas, 4 Oil

By SPECIAL CORRESPONDENT

PITTSBURGH, Pa., Oct. 16.—Increasing activity is noted in all the districts of the lower Eastern fields. In West Virginia five new permits were issued by the Department of Mines during the week. In Wirt County, R. E. Waggoner has a permit for a well on the Alfred K. Nippert and others' lease in Burning Springs district. In Gilmer County one has been issued for another well on the Lee Gainer farm in DeKalb district to the McCall Drilling Co. In Cabell County, Gideon district, R. H. Adkins has been granted one for a test on the West Virginia Brick Co. property. In Clay County, Washington district, Grant Fowler has a permit for a test on the Bee Hopkins farm. In Lincoln County the United Fuel Gas Co. has a permit for a test on the Nannie Burton and others' lease in Union district.

Completions were fair in the Eastern fields during the week. Fifteen wells were completed of which 11 were gas wells and 4 were producers with an initial production of 140 bbls. In addition there were three dry holes reported. All the production was in Southeast Ohio, none being tests. One test was a fair gas well.

SOUTHEAST OHIO

The best test for the week in Ohio was in Cuyahoga County, where Ohio Fuel Gas Co. completed its No. 1 on the Frank M. Mussehl farm in the NE of Section 38, Strongsville Township. It was drilled in the Clinton sand at 2,906 feet and is showing for aboct 2,000,000 feet a day.

In Knox County, Preston Oil Co. completed No. 3 on the A. J. Beatty farm in Section 21, Butler Township. It was drilled in the Clinton sand and after shot is producing about 32 bbls. a day.

In Licking County, Blue Rock Oil & Gas Co. and Park National Bank of Newark and others completed No. 5 on the William D. Booth farm in Section 14, Fallsbury Township. It reached the Clinton sand at 3,044 feet and produced 73 bbls. the first day after shot.

In Medina County a fair shallow well was completed, No. 7 of D. A. Lake on the Pearl and Frank Weaver farm in Section 1, Litchfield Township. It is a producer at 365 feet in the Berea grit and made 20 bbls. the first day after shot.

In Monroe County, Lumbates & Greene completed a test on the Albert Mallett farm in Section 10, Franklin Township. It is a small gas well in the Berea grit at a depth of 1,685 feet and is showing for about 35,000 feet a day with one-half barrel of oil.

In Tuscarawas County, Gordon Oil Co.'s No. 3 Account and others completed a fair well in their No. 4 on the Ralph Huffman farm, Lot 35, Washington Township. It was drilled in the Niagara lime at 3,696 feet and showed about 15 bbls. a day natural. The well has not been shot.

In Washington County two dry holes were reported. In Section 19, Aurelius Township, Elmer Wickens drilled No. 13-A on his own property through the Salt sand to a depth of 1,268 feet and found it dry. In Section 1, Muskingum Township, John L. Wagner drilled No. 5 on the Wallace H. Wagner farm through the Macksburg 500-foot sand to a depth of 817 feet. It proved a dry hole.

WEST VIRGINIA

No producers were completed in West Virginia during the week. Two additional tests are expected in shortly in Lost Run Pool, Clay district, Ritchie County, where additional wells are drilling. The daily production of this pool continues in excess of 2,000 bbls. a day with the original Hinton farm well, completed in late February, still making about 50 bbls. a day.

Of prime interest is the new drilling starting in that pool. Ralph Roberts and others have started drilling on the Sada McGinnis farm, north of the Frederick farm. Smith & Hendershot are spudding in a second test on the Charles H. Frederick farm. Frank Finley and others are down 900 feet on the Biddie Fox farm, the lower southeast corner of which is the Frederick farm. The Frederick farm well is still producing in excess of 200 bbls. a day. On the Frank R. Ball farm, Richards Oil Co. is fishing at 700 feet in its No. 4 and has made a location for No. 5 and started building a rig about 600 feet southeast of No. 4. Richardson and others are down 1,600 feet on the Ruth Andrews farm. On the headwaters of Lost Run, Boehm & Strickler Oil Co. has made a location for No. 5 on the Boehm & Strickler farm. It is about 500 feet southeast of its No. 4, same farm.

Gas Wells

In Cabell County there were two fair gas wells. In Guyandotte district, J. W. Ramsey & Son completed a test on the W. E. Duncan lot in the shale at 2,681 feet. It is showing for about 3,000,000 feet a day. In the same district, which is the scene of a recent pool, Guyan Valley Gas Co. completed a test on the Big Four Realty Co. property in the same formation at 2,815 feet. It is good for 1,000,000 feet a day initial.

In Calhoun County there were four completions, all gassers. In Sherman district, Poling & Mollahan completed a test on the Almetta Wilson farm in the Injun sand at 2,078 feet. It is showing for about 200,000 feet a day, natural. In the same district, McCall and others completed a test on the White Hall farm in the Injun sand at 2,247 feet. It is a light gas well, natural. In this district, C. A. Jarvis and others completed a second test on the Ida M. Whipkey farm in the Injun sand at 1,965 feet. It will make a small gas well, natural. In Sheridan district, Chemical Oil Co. completed a fair second test on the Margaret J. Webb farm in the Injun sand at 2,076 feet. It is showing for over 250,000 feet a day, natural.

In Clay County a fairly important test proved dry. In Henry district, Davenport & Davis and others drilled a test on the M. S. Price and Holt heirs farm through the sands, including the shale, to a total depth of 3,340 feet. There was no commercial production.

In Ritchie County, Walter H. Bickel completed a test on the Jennings Fox farm on Leatherbark Creek in Murphy district about 2½ miles southeast of Smithville. It was drilled in the Injun sand, depth 1,906 feet, and is showing for about 250,000 feet a day with a showing of oil. In Grant district, in the lower Old Bonds Creek Pool, Leeton & Flanigan drilled a test on the Roy Delancey farm through the Big Injun sand. It is a small gas well with no showing of oil.

In Roane County, Charles Despard and others drilled their No. 1 on the Charles Starcher farm in Smithfield district deeper from the Salt sand to the Injun sand and a depth of 1,925 feet. It is showing for about 425,000 feet a day natural from that formation.

Drilling in West Virginia

In Cabell County, Lusher Brothers have a rig standing on the Fessenmyer Brewery Co. lot in Guyandotte district. In this district Martin & Swanson are down 1,300 feet on the Humphrey farm, and the H. H. Baker Gas Co. is down 200 feet on the J. M. Lewis farm. In McComas and Union districts, no progress was noted.

In Calhoun County, Center district, Fisher & Smith have the material on the ground on the C. A. and M. S. Snider farm. Here, W. A. Bickerstaff is down 1,900 feet and reaching the Injun sand in a second test on the Edward Gainer farm, and Hope Construction & Refining Co. is on top of the sand in drilling deeper its No. 1,140 on the Mary A. Stump farm. M. V. Wright has completed his rig on the Beeman Wright farm. In Sheridan district, M. F. Crawley is drilling deeper his No. 1 on the L. E. Hughes farm and has reached 1,750 feet. L. B. Carroll is down 1,800 feet in No. 13 on his own property. In Lee district, Litt Oil & Gas Co. has rigged up on the J. S. Wade farm. In Sherman district, F. F. McIntosh has the material on the ground for a second test on the O. S. Bennett farm. Creed Barker is down 1,800 feet on the M. C. Haught farm. L. P. Bickel has reached 1,200 feet in No. 12 on the Martha Stump heirs farm.

In Lincoln County, Pridemore & Adkins are drilling at 1,400 feet on the J. Miller farm in Jefferson district. In Boone County, Cambridge Gas Co. has started drilling No. 7 on the Roman Pickens farm in Scott district, and is fishing the tools at 65 feet in No. 6 on the C. C. Lewis heirs farm in Washington district.

In Ritchie County, Ralph Roberts is drilling at 925 feet on the Thomas Maloney farm in Grant district. In this district, Russell Morris and others are down 1,600 feet in a second test on the J. E. Hardbarger farm. Anderson & Smith are drilling at 950 feet on the Maloney heirs farm, and J. Swingle and others at 1,730 feet in a second test on the George Norris farm. In Murphy district, Wilson & Baker have started drilling No. 24 on the Ritchie Mines.

In Gilmer County, Harley Satterfield and others have started drilling on the Rosa Ellyson farm in DeKalb district. Clem and others are drilling at 1,250 feet in a second test on the Cora B. Gainer farm; McCall and others have started a second test on the Lee Gainer farm; Charles Despard has a rig on the M. L. Amos and others' farm. All are in DeKalb district.

SOUTHWEST PENNSYLVANIA

No wells were completed in Southwest Pennsylvania during the week. In Greene County, Meadow Run Oil & Gas Co. is drilling a second test on the Lewis Vance farm in Dunkard Township about 2½ miles northwest of Davistown. In this township, Convex Glass Co. has reached 3,100 feet on the Samuel Morse farm. In Richhill Township, Richhill Oil & Gas Co. has started a test on the F. W. Baldwin farm. Myers, Hoskinson and others have completed a rig on the John N. Clutter farm.

In Washington County, in Amwell Township, Carnegie Natural Gas Co. is moving in a rig on the Baumberger farm. Manufacturers Light & Heat Co. is drilling at 1,960 feet on the Maggie I. Craft farm. The Pittsburgh Coal was at 745 feet, and the top of the Big Injun sand at 1,908 feet. In East Findley Township, Hallam Lewis and others are down 2,700 feet on the H. D. Ely farm. In Hanover Township, Carnegie Natural Gas Co. is drilling deeper its test on the J. C. Baim farm. It was formerly a gas well in the coal. In West Bethlehem Township, Ecwood Oil & Gas Co. is drilling at 1,470 feet on the Mansfield farm, and the Naomi Oil & Gas Co. is down 3,120 feet in a test on the E. E. Daniels farm.

Hobbs Proration Is Extended for Another Year; Ten New Locations Reported in Cut Bank

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Oct. 16.—Hobbs proration agreement has been extended for another year after the operators and the New Mexico state officials made a few minor changes. Drilling in Lea County is now down to one well in the Hobbs Pool and two in the Jal area. The Grayburg Oil Co.'s No. 4 Burch, in Eddy County, blew in unexpectedly and injured two drillers. Only one small completion, in San Juan County, was reported.

The Ramsey Petroleum Co.'s test in northeastern Colorado topped the Muddy at 6,794 feet and first cores showed oil and gas. The fate of the well is not yet apparent. New depth record for Colorado has been established by the Mountain Fuel Supply Co.'s No. 2 Wilson, on the Hiawatha Dome, at 7,325 feet. Colorado had no completions and no new locations.

Three flowing wells were completed in the Osage Field in Wyoming and one new operation was reported. One well was abandoned in Natrona County and another in Lincoln County. A Madison lime test in the old Torchlight Field is showing oil saturation with water above and below.

The Cut Bank Field in Montana had its best completion in the Santa Rita Oil & Gas Co.'s No. 1 Cardwell, which flowed 300 bbls. first 24 hours. Ten new locations were reported.

Utah is showing an increase in drilling activity, particularly in Washington County.

NEW MEXICO

The operators in the Hobbs Pool and representatives of the State of New Mexico reached an agreement to extend the proration agreement for the field which has been in effect the past year to July 1, 1934. The only changes made were of a minor nature. The old basis of prorating the field, 25 per cent on acreage and 75 per cent on well potentials, will continue in effect. An effort made several months ago to change this basis to 40 per cent on acreage and 60 per cent on well potentials failed for lack of signatures of all the operators.

The potential for the Hobbs Pool as of October 1 was 1,336,397 bbls. daily from 198 wells on 180 units of 40 acres each. The allowable outlet for the first half of October was placed at 33,532 bbls. daily, the same allowable in effect for the past six months. Pipe line runs for September aggregated 1,007,141 bbls., bringing total runs since proration went into effect up to 36,910,758 bbls. Nominations for purchases during the first half of October remained practically unchanged and consisted of 18,000 bbls. daily for the Shell Pipe Line Co., 9,630 bbls. for the Humble Pipe Line Co., 4,557 bbls for the Atlantic Pipe Line Co., and 1,345 bbls. for the Texas Co.

Lea County

The only active operation in the Hobbs Pool is Shell Petroleum Corp.'s No. 3 Grimes, SW NE SW Section 28-18-38, an inside location, which cemented 15½-inch at 246 feet and is drilling at 657 feet in the red beds.

Western-Anton's No. 1 Conditt, C SW SW Section 12-25-36, Jal area, is coring in lime at 3,330 feet and will test through drill stem. This location is half a mile north and the same distance south and a little east of the nearest producers in the northern part of the field. Continental Oil Co.'s No. 2 McCallister A-24, NW NE NE Section 24-26-36, is drilling at 2,930 feet in anhydrite.

Eddy County

Louie Burch and Pearl Johnson, drillers at Grayburg Oil Co.'s No. 4 Burch, C SE NW Section 19-17-30, Maljamar area, were severely injured the past week when the well unexpectedly blew in at 3,110 feet. The men were working at a forge 200 feet away from the derrick when gas was encountered and became ignited. The drillers expected to go another 10 feet before the oil and gas would be encountered. Both were severely burned and the rig was destroyed. The fire was extinguished about 10 hours later. The well had 200 feet of oil in the hole from 3,080-85 feet. The oil went 150 feet over the top of the derrick when it blew in and one estimate placed the production at 700 bbls. The location is one-fourth mile east of No. 3 Burch, which gauged 520 bbls. and 1,250,000 feet of gas first 24 hours at 3,101 feet, when it was completed more than a year ago.

C. H. Lockhart and others' No. 2 Root, C SW SW Section 7-17-30, is drilling at 2,910 feet.

In the Jackson area, Harry Leonard and others' No. 9 State, SE cor. NW Section 22-17-29, is drilling at 1,125 feet in anhydrite. It topped the salt at 275 feet and bottomed that formation at 703 feet. Western Drilling Co.'s No. 2-A Green, C SW NE Section 29-17-29, is drilling at 2,440 feet in lime.

Ralph Spearow and others' No. 1 McClellan, SW NW NE Section 22-22-23, Indian Creek district, is drilling at 3,940 feet in black lime and a show of gas was reported at 3,886 feet. Pecos Valley Drilling Co.'s No. 1 McIntyre, NW NW Section 27-23-25, Dark Canon district, is drilling at 670 feet.

Van P. Welch, Jr., and others' No. 1 State, NW NE SE Section 22-17-28, Artesia area, 1½ miles north and east of the nearest producer, gauged 25 bbls. per day initial production from a total depth of 2,027 feet. It may be shot. The oil is 37.5 degrees gravity. Flynn, Welch & Yates' No. 66 State, NW SE SE Section 30-18-28, is shut down at 1,970 feet and may be deepened.

R. D. Compton Oil Co.'s No. 6 State, SW NE SW Section 15-16-23, Upper Cottonwood district, is drilling at 420 feet.

Chaves County

George Etz and others' No. 1 Duke,

(Continued on Next Page)

Encouraging Oil Show in Sunburst Indicates Possible Extension of Red Coulee Field

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Oct. 14.—In the Alberta end of the international Red Coulee Field, Skov Oil Co.'s No. 1 Kotop, LSD 2, Section 2-1-17w4, is reported drilling into production in the Vanalta sand after getting an encouraging show of oil in the Sunburst between 2,586 and 2,589 feet. The first show in the Sunburst is reported to have bailed at the rate of 11 bbls. a day, and commercial production is looked for in the lower horizon. The strike indicates a possible important extension of the Red Coulee Field to the west. The first production in this area was encountered by Vanalta Oils, Ltd., several years ago in Township 1-16w5 and practically the entire commercial production of the Canadian end of the field has since been developed close to the discovery well in the same township. Skov's No. 1 is farther west, in Township 1-17-w5, on either the west fold of the Red Coulee structure or on a different structure to the west of the original structure. It is reported that crude from the Sunburst tested 38.9° Be., considerably higher gravity than that found farther to the east.

Skov's No. 1 was started some years ago by Kotop Oils, Ltd., of Calgary. It was then known as Kotop's No. 1-A, the original Kotop's No. 1 having been abandoned owing to drilling difficulties at 1,650 feet. Some additional drilling was done by D. A. MacDonald and associates of Vancouver. Last spring the test was taken over by R. Skov of High River who organized the present company. Some redrilling has to be done and there was a lot of delay owing to fishing and casing troubles. The reported strike has led to considerable new filing on acreage near the Skov well.

In the Montana end of the field, Askalta Oils' No. 8, S half N half Section 22-37-4w, is reported spudding. Finn Investments' No. 1 Buckley, W half SE Section 12-34-6w, has started drilling with rotary outfit.

Turner Valley Deliveries

In the Turner Valley Field, deliveries to the Imperial and Bell refineries for September totaled 67,412 bbls. In August deliveries to all three refineries totaled 68,339 bbls. The September figures include 14,969 bbls. of naphtha, 42,324 bbls. of discolored naphtha and 4,507 bbls. of light crude taken by Imperial Oil, Ltd., and 5,612 bbls. taken by the Bell refinery.

A summary shows that for the nine months of 1933, ending September 30, deliveries totaled 507,883 bbls., compared with 547,231 bbls. in the same period of 1932. While the first four months of 1933 showed drastic declines, and deliveries in May were a little lower than in the same month last year, the four months since then have registered substantial increases, due largely to the operation of the Royalite gasoline absorption plant.

South Turner Valley Producer

In the Mercury tract, South Turner Valley, Miracle Oils' No. 2, LSD 16, Section 5-19-2w5, shows some increase in production on continued testing, averaging 110 bbls. a day of high grade crude from the lower lime at 6,800 feet. Water has not been entirely cleaned out. In the same section Associated Royalties' No. 1 Spray, LSD 9, has landed 13⅜-inch casing at 3,400 feet and is arranging to run three tours.

Mar-Jon Section

In Section 28-18-2w5, Becker Syndicate's No. 2 Anaconda, LSD 15, is drilling below 4,700 feet in a formation alternating hard and soft sands and thought to be the Dalhousie. Some gas was struck at 4,620 feet, at the supposed Dalhousie contact, and small shows of oil and gas have been met at intervals since.

Mar-Jon Oil Co.'s No. 2 Kindersley, LSD 10, is in the Blaimore formation below 3,355 feet. This is a rotary test. Sunburst-Mid Royal's No. 1, LSD 14, is below 1,500 feet. Pacalta Oils' No. 1, LSD 7, is below 2,770 feet. Publix Oil & Gas Co.'s No. 1, LSD 8, is below 1,750 feet.

South Turner Valley

In the South Turner Valley, Livingston Syndicate's No. 1, LSD 5, Section 34-18-2w5, is drilling at 2,879 feet. Sterling Royalties' No. 1, LSD 1, Section 33-18-2w5, rotary test is below 4,215 feet, close to the Home sand.

In the far south end, Union Drilling Co.'s No. 1, LSD 8, Section 21-18-2w5, is below 880 feet. Hoffar-Lundy Syndicate's No. 1, LSD 13, Section 22-18-2w5, is underreaming between 3,500 and 3,600 feet. Drilling has been held up by caving.

In LSD 5, Section 27-18-2w5, Northwest Co.'s No. 2 Calgary & Edmonton Corp. is reported rigging up. This will be the first test undertaken by Imperial Oil, Ltd., in Turner Valley since its original drilling program was completed over a year ago. Location is in the same section as Merland Oil Co.'s No. 1, one of the largest producers in the field, and close to the extensive drilling operations in Section 28-18-2w5.

Hunter Valley Operations

In the forest reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren, Township 31-10w5, is at 2,430 feet and running cement to overcome caving. No. 1 well, started May 20, is on the north bank of the Red Deer River, on the crown reserve pertaining to the Katherine lease, and is subject to one-eighth royalty to the Alberta government. The location is 64 miles from the nearest railroad, and over 20 miles of road had to be built before some 100

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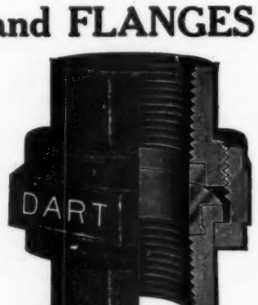

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tons of material could be moved in. Gas was met at 980 feet, and 16-inch casing cemented at 1,550 feet. The gas production is being used under the boiler. At 2,403 feet the drill was working in a black shale, and it was planned to drill to 3,000 feet before setting the 13⅜-inch casing.

Drilling is on an entirely new structure some 90 miles west of Turner Valley. The complete absence on the surface of strike faulting and folding, so prevalent in Turner Valley, makes it most unlikely that oil will be encountered in the equivalent of the Stockmen, McDougall-Segur, Home and possibly Dalhousie sands, which, according to Campbell Hunter, president of the company, are stray sands into which oil has migrated along fault planes from its source rock lower down in the Fernie shales. A proportionately larger production is anticipated in the deeper reservoir rocks, possibly the brown sand between the Kootenay and Fernie formations and particularly the Palaeozoic limestone. Mr. Hunter anticipates a high grade crude oil rather than a naphtha laden wet gas. Tentative location for No. 2 has been made about 1 mile south.

Tests in the Foothills

In the old Oil City Field, southwestern Alberta, Oil City Royalties' No. 1 Patrick, Section 30-1-30w4, is drilling below 1,050 feet in a hard black formation containing traces of oil. The test is at approximately the depth at which production was met in the discovery well 30 years ago, but the steep dip of the formation may necessitate perhaps 100 feet of extra drilling.

Border Fields

On the Twin River structure south of Lethbridge, Nordon-Roney's No. 2 Twin River, LSD 11, Section 2-2-20w4, is preparing to test oil showings in the top of the Madison lime at 3,930 feet. When the strike was made some months ago a gas flow, estimated 5,500,000 feet, sprayed oil over the derrick.

On the Alberta end of the Reserve Dome structure, Rialto Oils' No. 1, LSD 4, Section 15-1-9w4, is reported drilling at 1,300 feet after setting 13⅜-inch casing.

On the Comrey structure south of Medicine Hat, Royalty Holdings' No. 1, Section 9-1-5w4, is reported spudding.

Northern Alberta Test

In the Athabaska district, northern Alberta, Athadome Oils' No. 2, LSD 3, Section 15-66-23w4, is making hole below 2,375 feet after installing new drilling line. At this depth the drill is working 150 feet in the lime.

Saskatchewan Gas Test

In southern Saskatchewan, Highwood-Sarcee Oils' No. 2, LSD 8, Section 23-12-24w2, on the Dirt Hills structure, has rebuilt derrick blown down in a recent storm and resumed fishing for tools lost at 1,625 feet.

British Columbia Drilling

In the Okanagan district, British Columbia, Okanagan Oil & Gas Co.'s No. 1, E half Section 2-26-Osoyoos Survey, is reported resuming at 2,725 feet. The formation is reported to be a dark sandy lime of Cretaceous age showing traces of oil. The test has been drilling several years, intermittently, and gas shows were previously reported at 1,826 feet and 2,050 feet, and traces of oil at 2,520 feet. At the latter depth the hole was full of water, which was later cased off. The well is near Kelowna, British Columbia.

Cloverdale Gas Test

At Cloverdale, British Columbia, a syndicate headed by T. G. Wilson of Calgary is drilling for gas west of Abbotsford and Sumas where gas in small quantities has been encountered in various tests. A potential gas sand is expected around 2,200 feet. The test is below 400 feet with 8-inch hole and sev-

(Continued on Page 68)

Rocky Mountain Area

(Continued from Preceding Page)

C SE NE Section 14-8s-26, Railroad Mountain district, is spudding.

McKinley County

Frank Weber and others' No. 1, SW NE Section 29-20-9w, Bonita district, is drilling at 412 feet and had a show of gas at 397 feet.

San Juan County

R. C. Oswell's No. 4 Government, SW NW NW Section 34-30-11w, Aztec district, has completed underreaming to 700 feet and is making new hole. McCoy & Phillips' No. 1 Martin, NE SE NW Section 34-30-11, is drilling at 660 feet. Aztec Producers, Inc.'s No. 1 State, NW SE Section 16-29-11w, is reported completed at 850 feet, but not tested. It is showing some water with a small quantity of oil.

COLORADO

Weld County

Ramsey Petroleum Co.'s No. 1 Scrivens, C NW Section 22-7n-59, Buckingham area, northeast Colorado, started coring at 6,781 feet and picked up the top of the Muddy at 6,794 feet. The core barrel was pulled after it had penetrated the sand 6 inches. It showed some oil saturation, the core being slightly discolored with oil and giving off a gasoline odor. Another core was then taken from 6,794 feet and 6 inches to 6,804 feet. The formation at 6,794 to 6,797 feet was mostly sandy shale and from 6,797 to 6,804 feet a hard and tight sand. There was a show of gas at 6,794-6,803 feet and oil from 6,803 to 6,804 feet. At last reports preparations were under way to resume coring.

The corrected depth of the base of the Timpas lime is 6,380 feet. There are several elevations being used for the well. The one most generally accepted gives it an elevation of 5,024 feet. This puts the top of the Muddy at 1,770 feet below sea level, or 19 feet lower than No. 1 St. Anthony, the Ramsey company's gas well three-fourths of a mile to the northeast. No. 1 Scriven was drilled to its present depth without casing, except for the 15½-inch surface pipe set at 181 feet. It spudded on September 6 and made 6,800 feet of hole in a few days more than one month. The way in which the formations stood up and the time taken to reach the first objective indicates that drilling costs in northeastern Colorado will be much lower than formerly estimated. The well is to be carried on down to the Dakota, but whether it will continue below the Muddy with rotary tools or change over to cable tools has not yet been decided. No. 1 St. Anthony, to the northeast, had oil saturation in the top of the Dakota, followed by water. It was drilled into that horizon with rotaary bit and it had penetrated the sand several feet before the three-foot core showing oil saturation was obtained.

Moffat County

Mountain Fuel Supply Co.'s No. 2 Florence Wilson, C NE NE Section 22-12-100, Hiawatha Dome, is coring and drilling at 7,325 feet in the Mesa Verde and has approximately 1,000 feet to go before it reaches the base of that formation. Same company's No. 1 Wheeler, SE NW NW Section 30-12-100, is drilling at 1,725 feet, and Texas Co.'s No. 1 Van Schaick, SW cor. Section 19-12-100, is shut down at 191 feet.

Rocky Mountain Gas Co.'s No. 1 Eberle, SE SW SE Section 9-6n-91, Craig Dome, after changing over to cable tools to drill deeper from 3,560 feet, is drilling at 3,780 feet in shale.

Texas Co.'s No. 1 Iles Investment, SE NW Section 23-4n-92, Iles Domes, is drilling at 3,225 feet in red shale. It is believed to have topped the Dakota at 2,850 feet.

William A. Myers and others' No. 1 State, NW SW SW Section 16-4n-101, Skull Creek, cemented the 6⅝-inch at 3,282 feet to dry up the hole, and is drilling ahead at 3,350 feet in the Mississippian.

Montezuma County

L. E. Teague and others' No. 1 West,

NE NW NE Section 31-36-17, McElmo district, is bottomed at 1,070 feet and has enclosed rig for winter operations and is cleaning out. This operation was taken over from the McElmore Lease Interests, who drilled to present depth.

Las Animas County

Mountain States Oil Corp.'s No. 1 Nikola, C NE SE Section 10-34-62, Garcia district, is drilling at 350 feet and had a good show of gas at 225 feet. The well is half a mile north of a basalt dyke and is logging quite different from the other wells drilled to the south.

Huerfano County

S. W. Pressey's No. 1 Ojo, SW NE Section 10-29-69, Oak View district, is drilling at 1,620 feet.

Fremont County

Cherry Creek Placer Co.'s No. 1 Lucas, SW cor. NE Section 32-18-69, Florence district, is drilling at 3,075 feet in blue shale, and Waterville Oil Co.'s No. 1 State, SE cor. NW Section 16-18-69, is shut down at 2,440 feet in black shale for underreamer.

Boulder County

Consolidated Smelting & Metals Co.'s No. 1 Blubaugh, SE cor. Section 20-3n-70, Lyons district, is fishing for pipe. Total depth is 1,100 feet. The 4¾-inch parted while being pulled to straight-ream. A show of oil at 1,050 feet was in lime and the hole is not yet in what the drillers call the Sundance sand.

WYOMING

Weston County

Two important completions on the extreme western and southwestern sides of the Osage Pool were reported this week. Yellowstone Oil Co.'s No. 4 Butcher, SE NW NW Section 23-46-64, found the sand at 1,882-96 feet and after being shot began flowing 10 bbls. per hour. Federal Oil Co.'s No. 5, SE cor. Section 15-46-64, which was estimated at 20 bbls. before being shot from sand at 1,868-82 feet, responded favorably after being shot and is flowing 125 bbls. per day. Another good completion is Western States Oil Co.'s No. 9 Julius Bock, CSL SE NW Section 14-46-64, which is flowing 100 bbls. per day initial after a shot from sand at 1,868-79 feet.

One new operation was reported in Albert Jones' No. 5, CWL SW NE Section 21-46-64, which is drilling at 260 feet. Riggs Oil Co.'s No. 3, SE NE Section 16-46-64, is drilling at 2,500 feet, and Hugh Updike & Son's No. 1, NE cor. Section 22-46-64, is preparing to run pipe on top of the sand. Chadron-Osage Oil Co.'s No. 21, SW cor. Section 14-46-64, is running pipe on top of the pay.

The Osage Oil Producers Association held a meeting on September 29 to confer with Pierre La Flesche, state oil and gas inspector, regarding the Osage Pool's allowable under the NRA code. The field was given an allotment of 750 bbls. per day. It actually is producing around 1,400 bbls. The inspector explained that the committee making the allotments within the State did not take into consideration the oil shipped out by truck. Inspector La Fleische stated that he would recommend to the state committee that the field's allotment be raised to 1,200 bbls. per day, to which the operators assented. The association also appointed a committee of nine to draft rules and regulations for co-operating with the Federal oil administration under the NRA code.

Some time ago when East Texas flush production got out of hand and broke the market, emergency freight rates were put into effect to move this crude out of the district. Under these rates East Texas crude could be moved to Canadian points as cheaply as from Casper. Wyoming producers are now agitating for the restoration of the old rates by the removal of the emergency tariffs. If that is done, Wyoming markets will be put back to where they were before East Texas upset the equilibrium.

Crook County

Dr. B. R. Kinter's No. 1 Rockford-Wyoming, NE SE Section 13-52-62, Rocky Ford district, is drilling at 325 feet after shutting off water at 300 feet with the 8¼-inch.

Niobrara County

Ed Shogren and others' No. 1 Olinger, Section 1-36-63, Old Woman Creek, is drilling at 100 feet. J. M. Huber Corp.'s No. 1 Joss, NE NW NE Section 6-35-65, Lance Creek, an old well drilling deeper from 3,200 feet, is spudding at that depth. Interstate Oil & Refining Co.'s No. 1 Morrell, NW NE SE Section 2-39-61, West Mule Creek, is reported drilling at 2,315 feet and to have drilled by tools.

Natrona County

Triangle Oil Co.'s No. 3 Ames, SW NE SE Section 29-36-85, North Boone Dome, was dry and abandoned. The Shannon sand was cut at 627-725 feet. Midway Oil Corp.'s No. 1 Boyer, SW NE NE Section 23-35-79, Midway Dome, is drilling at 3,600 feet.

Carbon County

Mutual Oil Syndicate's No. 9 Dutton Creek, NW NE Section 12-18-78, Dutton Creek, is fishing for drill pipe at 4,658 feet, total depth. All but one joint has been recovered. Ohio Oil Co.'s No. 2 Hazlett, NE NE Section 34-23-79, Allen Lake, is drilling at 2,220 feet. At 1,760-1,860 feet it cut a sand not found in the other wells. Producers & Refiners Corp.'s No. 4 Wertz, SW cor. SE Section 7-26-89, Wertz Dome, is fishing for drill rods at 3,541 feet. Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, is redrilling after cementing back from 2,800 to 2,600 feet.

Lincoln County

Woods Oil & Development Co.'s No. 2, C NW SE Section 14-21-117, Fossil district, was abandoned at 376 feet, and H. C. Harris and others' No. 1, C NW SE Section 14-21-117, is drilling at 1,670 feet in shale.

Sublet County

Woolf Petroleum Co.'s No. 3-L, SE SW SW Section 5-27-113, La Barge district, suspended at 1,408 (corrected) feet. Cretaceous Oil Co.'s No. 1 Government, NW NE Section 12-28-114, Dry Piney district, is drilling at 930 feet.

Uinta County

An operation not heretofore reported is Hyland Oil Co.'s No. 1 Government, SE cor. SW Section 30-14-118, Aspen district, shut down at 503 feet for bond. Sackrider & Spaulding's No. 1 Union Pacific, C NW NE Section 28-15-117, Meridian district, is running the 8¼-inch to bottom at 1,530 feet for water shutoff.

Washakie County

Caton Oil Trust's No. 1 Bales, C NE SE Section 30-48-90, Hidden Dome, is drilling at 1,000 feet, and D. L. McDonold's No. 1 Wheeler, SW cor. SE Section 30-48-90, is drilling at 1,550 feet.

Big Horn County

Torchlight Oil Corp.'s No. 1, SW cor. SE Section 19-51-92, deep test in the Torchlight Field, set the 4¾-inch at 3,798 feet and drilled to 4,165 feet in the Madison lime. It had water at 4,838 feet and drilled wet into saturated oil sand at 4,004-50 feet. At 4,068 feet it encountered a flow of sulphur water. Efforts are being made to shut off top and bottom with packers and make a test. Keystone Oil Co.'s No. 2 Jones, Lot 61, NE Section 20-52-93, Greybull Field, is drilling at 250 feet.

Hot Springs County

Empire State Oil Co.'s No. 4 Republic, NE cor. NW Section 14-44-98, Hamilton Dome, is underreaming the 8¼-inch to bottom at 1,650 feet.

Park County

V. M. Kirk's No. 1 Government, SW cor. Section 24-58-98, Frannie Dome, is drilling at 520 feet.

MONTANA

Glacier County

One of the best producers so far com-

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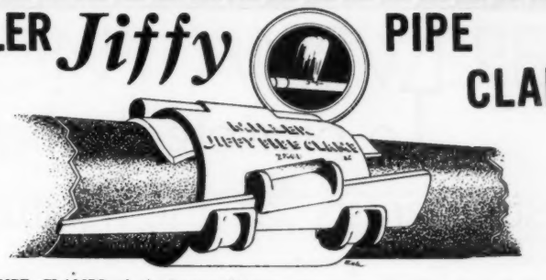

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KEEP ASSORTED SIZES ON HAND FOR EMERGENCIES.

Size of pipe	2-inch	3-inch	4-inch
Length of clamp	4-in. or 8-in.	6-inch	6-inch
Price each.....	$1.00—$1.75	$2.00	$2.40

Order through your supply store or direct—we pay shipping charges on orders of one dozen or more clamps.

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are ideal for gasoline, kerosene, steam, oil. No matter what the color of the liquid, they show the level in BLACK.

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Safe and durable at highest pressures and temperatures. Furnished with or without valves for every type of service. Write us.

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SOMERVILLE, MASS.

McGREGOR WORKING BARREL CO., INC.

BRADFORD, PENN'A.

TESTIMONIAL

Sept. 9, 1933.

Dear Sir:

On Dec. 29, 1932 we installed one of your new improved working barrels on our state line lease well No. FH-4.

Since we installed this barrel it has run 24 hours per day since the above date and has given perfect service.

Yours very truly,

Petroleum Reclamation Co.

R. W. Weaver,
Pur. Agt.

We also manufacture other kinds of working barrels including McGregor Barrels and Standard Barrels. We manufacture all kinds of balls and seats which we guarantee to be as good or better than any on the market. If your dealer does not have the above, write us for prices and further information.

McGREGOR WORKING BARREL CO., INC.

BRADFORD, PENN'A.

To promote the highest interests of the Natural Gasoline Industry the

NATURAL GASOLINE SUPPLY MEN'S ASSOCIATION

was organized

▼

Active Members who are supporting this program are:

American Car & Foundry Co.
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Tulsa Boiler & Machinery Co.
B. W. Vinson Company, Inc.
Webster Engineering Co.
Westcott & Greis, Inc.
Worthington Machinery Corp.

pleted in the Cut Bank Field is Santa Rita Oil & Gas Co.'s No. 1 Cardwell, C NE SE Section 15-35-6w, in the extreme northwestern part of the pool, half a mile southeast of the same company's two wells on Indian land, and 2 miles north of the nearest flowing well. None of the wells in between have done as well. No. 1 Cardwell had 1,500,000 feet of gas in the Stewart sand at 2,824 feet, which was cased off. It drilled into the Darling at 2,862 feet and began flowing at 2,880 feet. The bottom of the Darling was at 2,893 feet and total depth is 2,897 feet. It made 300 bbls. the first 24 hours and is now flowing and swabbing 215 bbls. per day.

New Locations

Ten new locations were reported this week as follows:

A. W. Cobb's No. 2 Walburger, SE Section 35-35-6w.

Montana Power Gas Co.'s No. 1 Mary Seeba, NE cor. NW Section 2-34-6w, laying gas line and skidding rigs from No. 1 Ewing. Same company's No. 2 Seeba, SE cor. NW Section 2; No. 3 Seeba, SW cor. NW Section 2, and No. 4 Seeba, NW cor. Section 2-34-6w.

Texas Co.'s No. 1 Marie Yunck, W NW SW Section 14-35-6w, and No. 1 State, C NE Section 16-32-5w. Last named is a wildcat in the South Cut Bank district, where another test is being started by the L. R. Hannah interests.

R. C. Tarrant's No. 2 Haglund, Sr., C NW NW Section 13-46-64, rig skidded from No. 1 Williams.

Commonwealth Petroleum Co.'s No. 1 Getty, C NE SW Section 15-34-6w.

Lon Crumley's No. 1 Mamie Billedeaux, E NW SE Section 27-35-6w.

There are no regulations or agreements in effect in regard to the spacing of wells and the number of operations getting under way will require considerable offsetting. A. R. Wilson, manager of the producing division for the Rocky Mountain district of the Texas Co., last week sent a special letter to the Montana Railroad Commission asking its earnest consideration of the situation and to take such steps as it thought necessary to bring about an agreement regarding the spacing of wells. He pointed out that the field is showing evidence of covering a large area and that wells up to the present have shown a low initial production. Indications point to a low recovery per acre and he cites the economical benefits to be derived not only by the operators, but the state and county and royalty owners in adopting a uniform spacing agreement for primary development.

Drilling Operations

Routine drilling operations include the following:

Dakota-Montana Oil Co.'s No. 2 Haglund, Sr., NE NE Section 14-34-6w, total depth 2,950 feet, running rods and tubing to pump. W. M. Fulton and others' No. 2 Haggerty, C NW NW Section 15-34-6w, rigging up. L. R. Hannah and others' No. 1 Peterson, SW NW NW Section 29-32-4w, South Cut Bank, resuming after spudding and shutting down to completed rigging. Montana Power Gas Co.'s No. 1 Miller, SW NE NE Section 4-35-5w, drilling at 2,420 feet, and its No. 1 Teterud, 790 feet east of west quarter corner, Section 2-35-6w, is drilling at 1,520 feet. Nyhagen-Bell's No. 1 Anderson, SE NE SW Section 26-35-6w, is drilling at 1,900 feet, and Par Oil Co.'s No. 2 Haines, SE cor. SW Section 2-34-6w, cemented 10¾-inch at 585 feet with 35 sacks.

R. C. Tarrant's No. 2 Britton, SW NW SE Section 14-34-6w, cemented 10¾-inch at 535 feet with 35 sacks, and his No. 1 Carman, C NW NW Section 19-34-5w, is drilling at 1,200 feet. Tarrant's No. 4 Haglund, Jr., C SE SE Section 13-34-6w, is rigging up, and his No. 1 Larson, C SW NE Section 12-34-6w, is drilling at 2,380 feet. Tarrant's No. 2 Miller, C SW NE Section 24-34-6w, is spudding at 65 feet, and his No. 1 Winkler, C SW SW Section 23-35-6w, is spudding at 150 feet.

Texas Co.'s No. 1 Fiske, C NW NE Section 14-35-6w, is shut down at 2,950 feet, and its No. 1 Haggerty, SE cor. Section 9-34-6w, cemented the 10¾-inch at 148 feet. Same company's No. 1 Hinkle, NW cor. NE Section 2-34-6w, cemented the 10¾-inch at 157 feet with 100 sacks.

The writer is in receipt of a new ownership map of the Cut Bank Field, gotten out by J. P. Shearon, Box 2,750, Cut Bank, Montana, which is a timely aid as few maps of that active district are available. It shows lease ownership, oil and gas producing wells, drilling wells, rigs up, locations and abandoned wells, oil and gas pipe lines, railroads, principal roads, boundary lines and rivers and creeks. It also carries an index of development and covers the area from Township 32n and Ranges 5w and 6w, to the Canadian boundary. Copies of the maps are for sale by Mr. Shearon.

Carbon County

Charles Orchard and others' No. 1 McMinn, NW SW SW Section 7-7s-22, Dry Creek, formerly Carbon Oil & Gas Co., has resumed, recovered tools lost at 5,551 feet, shut off water in the bottom of the Dakota, and is drilling in sand at 5,712 feet with considerable oil and gas showing. The Jack Creek Oil Co.'s No. 1-A, SW NE SE Section 15-7s-23, Jack Creek, was abandoned at 1,324 feet.

Gallatin County

A new operation in the Three Forks district is Ben W. Ryan's No. 1 Tice, NE cor. Section 28-1n-2e, which is drilling at 200 feet with rotary tools. Montana Gas & Petroleum Corp.'s No. 1 Adams, SE cor. Section 36-2n-1e, is changing from rotary to cable tools at 1,765 feet.

Golden Valley County

Golden Valley Oil Co.'s No. 1, SW SE SE Section 28-6n-22, Belmont district, is fishing for tools at 3,608 feet.

Judith Basin County

Fletcher E. Hunt's No. 1 Payne, C SW SW Section 21-14-15, Hobson district, is drilling at 1,112 feet.

Toole County

Edmonton-Montana Syndicate's No. 1 Adams, NW cor. SW Section 18-34-1w, Kevin-Sunburst Field, was dry and abandoned at an unnamed depth. A. H. Blaze's No. 2 Burwick, SE NE SW Section 13-34-1w, is shut down at 1,225 feet.

C. Leonard Smith's No. 1, SW cor. SE Section 7-33-2e, East Shelby, failed to find the gas expected at 700 feet and will drill deeper to the Sundance.

A new operation in the Border Field is Alberta Development Co.'s No. 1 Buckley, NE SE SW Section 1-37-4w, which is drilling at 2,250 feet with rotary tools.

Hill County

Fargo Oil & Gas Co.'s No. 1 Morris, C SW NW Section 29-37-15e, Signal Butte district, has resumed after being shut down for some time. The 5$\frac{1}{16}$-inch was cemented at 1,130 feet on top of caprock.

Liberty County

Western Natural Gas Co.'s No. 1 Shaffer, SW cor. SE Section 14-37-4e, Whitlash district, is drilling at 1,220 feet after plugging back to 600 feet.

SOUTH DAKOTA

Wytex Oil & Gas Co.'s No. 2 Hamilton, SE cor. NE Section 32-8n-1e, Butte County, is drilling at 1,820 feet and had a show of oil in the Minnelusa at 1,529 feet.

UTAH

Diamond Oil Co.'s No. 4, SE NW Section 16-8s-5e, Utah County, had sulphur water at 3,532 feet and is underreaming the 5$\frac{7}{8}$-inch pipe at 3,454 feet. Ramsey Petroleum Co.'s No. 1 Senior, C NE SW Section 18-26-7e, Last Chance Dome, Emery County, has resumed at 320 feet and is sidetracking bit. Virgin Dome Oil Co.'s No. 1, NW cor. Section 16-42-14, Washington County, cemented the 4¾-inch at 3,000 feet for a water shutoff, and Arrowhead Petroleum Co.'s No. 1-A, SE SW NE Section 1-43-15, is drilling at 634 feet in lime. Esclante Exploration Co., Ltd.'s No. 2, NW cor. NE Section 19-43-15, has recovered drill stem and is making new hole at 3,721 feet.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the questions is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Fire Box Steel Suitable For Shell Coke Stills

What form of sheet steel is considered to be the most satisfactory for building coke stills? The chemical composition, together with physical properties, would be appreciated.—B. M. S.

This specification is the one in common use for stills, reaction chambers, towers and other units built for cracking. It is known as fire-box steel. The specifications are from the A.S.M.E. boiler construction code, formulated by the boiler code committee of the American Society of Mechanical Engineers, as issued 1930, page 96.

(A) The steel shall be made by the open-hearth process and conform to the following requirements as to chemical composition.

Fire-Box Steel

	Per cent
Carbon:	
Plates three-quarters inch thick or less	0.25 (max.)
Plates over three-quarters inch thick	0.30 (max.)
Manganese:	
Plates three-quarters inch thick or less	0.3 to 0.5
Plates over three-quarters inch thick	0.3 to 0.6
Phosphorus:	
Acid	0.04 (max.)
Basic	0.035 (max.)
Sulphur	0.04

The material shall conform to the following requirements as to tensile properties:

Tensile strength, lb./sq. in.	55,000-70,000
Yield point, lb./sq. in.	0.5 tensile strength
Elongation in 8 in. (min.) per cent	$\frac{1,550,000}{\text{tensile strength}}$

(B) Tensile strength need only be determined on the test specimen taken longitudinally from the top of the plates, and it shall not exceed 70,000 pounds per square inch.

(C) Should the above rule for minimum elongation give a value of less than 25 per cent, the minimum allowable elongation shall be 25 per cent, subject to modifications of Section 6.

(D) The yield point shall be determined by the drop of the beam of the testing machine.

Modification in elongation—For material over three-quarters inch in thickness, a deduction from the percentage of elongation specified in Sections (A) and (C) of 0.125 per cent shall be made for each increase of one-thirty-second inch of the specified thickness above three-quarters inch to a minimum of 20 per cent.

Bend and homogeneity tests are also made.

While a shell still is not considered so great a fire and explosion hazard as a high pressure cracking still of the tube type, a similar watch must be maintained for an approaching failure. There has been a tendency to make use of special alloys in tubes that do not give the warning signs of the carbon steels, such as change of color and sweeling. The change of color of a hot tube, or initial sweeling, will be detected by the skilled operator in time to permit adjustments of temperature or to cut the unit out of service. When the high (18 per cent) chromium and (8 per cent) nickel alloyed steels are used the warning signs are absent, the metal bursting suddenly, with the result that destructive fires follow.

Some operators have considered steels containing about 0.5 per cent molybdenum and possibly 4 to 6 per cent chromium, with the object of preventing the buckling of the sheets in coke stills. But this would increase the price from approximately 5 cents a pound for fire-box steel to possibly 16 cents for the high molybdenum-chromium metal. Two to three per cent nickel in the steel might double the life of the bottoms but the cost would also be about three times that of fire-box steel. Experiments will have to be made with special steels to determine if sufficient additional service can be obtained to warrant the extra expense.

The way the still is handled in service probably has more to do with the life of the metal than its chemical composition. Examination of localized hot spots reveals that a group of cracks has been formed. These cracks always start from the inside, apparently caused by the more rapid cooling of the outside surface of the bottom plates than the inside, when the still is shut down. It has been found that when the operator equalizes the rate of coke cooling with the rate of furnace cooling, that the number and size of these cracks is decreased and consequently the life of the plates extended.

Mercaptans Useful as Base Material for Syntheses

I am informed that the mercaptans found in natural gas and crude oil are considered excellent materials for the preparation of valuable solvents. Can you give me any explanation about this?—H. C. Y.

The mercaptans are being utilized as warning agents for the liquefied gases, especially those of the propane and butane types.

Wiezenvich, Turner and Frolich, explain, in Ind. Eng. Chem. 25-295, 1933, that the mercaptans may serve as a source for basic material to be used in the synthetic preparation of valuable organic products.

Ethyl mercaptan may be converted into ethyl thioether, which, in the presence of ethyl alcohol, is a solvent for cellulose nitrate. Thioethers are also useful as rubber solvents. They readily discolor certain resins, including petroleum gums. The thioethers form the foundation material for the preparation of sulphonium compounds; the sulphonates being of interest as detergents, wetting agents and demulsifiers.

Ethyl disulphide may be prepared from the mercaptan by oxidation in air at about 300° F. in the presence of iron, copper, iron sulphide, charcoal, etc.

Ethyl thiether may be oxidized with hydrogen peroxide in glacial acetic acid to ethyl sulphoxide $(C_2H_5)_2SO_2$, which may find some application as a plasticizer for pyroxylin. Diethyl sulphone, $(C_2H_5)_2SO_2$, may be made by oxidizing with hydrogen peroxide without cooling or by oxidizing with hypochlorite.

Absorbent Oil Meeting Laclede Specifications

Have you the details of what were known as the Laclede Specifications for absorbent oil and which were in use about the year 1920 or earlier?—M. S. A.

The specifications for absorbent oil, circulated about 1918 by the Laclede Gas Light Co., were as follows:

Gravity:

1. Specific gravity should not be heavier than 0.88 at 60° F., or 29.3 A.P.I.

Viscosity:

2. Viscosity should be low. Maximum allowed: 92 seconds Saybolt at 70° F.

Distillation, steam—off at 212° F.:

3. A half kilo of oil distilled with steam at 212° F. in a flask fitted with a dephlegmator should not yield more than 10 cc. of distillate. The still should not be heated with the direct flame.

Distillation—emulsion:

4. Steam distillation of the oil as in No. 3 should produce no permanent emulsion. After 15 minutes there should be no band of emulsified oil between the oil and water. The line of division should be sharply defined.

Distillation, dry—initial:

5. When dry distilled, with the thermometer bulb immersed in the oil, there should be no distillate below 545° F.

Pourpoint—flow test:

6. Must not thicken upon cooling to 40° F.

Emulsion test:

7. When 10 cc. of the oil is shaken vigorously in a stoppered cylinder with 10 cc. of water, at least 95 per cent should separate in 10 minutes.

Olefines:

8. The oil should not lose more than 10 per cent in volume when washed with 2.5 times its volume of a mixture of two parts of 93 per cent sulphuric acid and one part of fuming sulphuric acid containing about 25 per cent free sulphur trioxide.

Relation Between C.F.R. Research and Motor Knock Ratings

I am confused about the proper statement of octane numbers for the sale of gasoline. What is the relation between the old and the new method of testing as to octane numbers?—R. M. W.

The investigations for determining the knock rating of gasoline and other motor fuels, which had been in progress for several years under the direction of the Co-operative Fuel Research Committee, finally resulted in the adoption by Committee D-2 of the American Society for Testing Materials of the C.F.R. Motor Method for determining the knock ratings, octane numbers, of motor fuels. This committee is regarded as the best authority in all matters relating to the methods to be used for the examination of petroleum products. The C.F.R. Motor Method has been considered the standard since April 1, 1933.

The former C.F.R. method, now designated Research Method, operated at a mixture temperature of 212° F. and the speed of the engine fixed at 600 r.p.m. This is to be continued as the standard condition for research purposes.

The new method, the C.F.R. Motor Method, requires that the temperature of the mixture shall be 300° F. and the engine speed 900 r.p.m. This is standard for trade use, because it is agreed that it gives comparative octane numbers which correlate far closer with the results when testing gasolines under road conditions than the Research Method, and consequently of greater practical value.

The Motor Method gives results that are of the order of three to five octane numbers lower than the Research Method.

Since there are many testing engines now in use that are not standard, it is advisable to state both the kind of engine and the conditions of test when reporting octane ratings.

Black Gasoline in New Mexico Proving Unsatisfactory

We are having complaints that gasoline colored black, as required in New Mexico for agricultural purposes, goes out of solution and clogs parts of the engine and we would like to know if there is any black dye which will give a deep black and stay in solution?—F. M. R.

A dye strong enough to give a full deep black, when used in the small quantities similar to the proportions in use for the reds, etc., is, apparently, not available. The dyes known as National Black R. and Petrol Black A, mentioned in this department the issue of June 15, 1933, seem to be suitable for giving an almost black shade but the quantity required, about 5 pounds per 10,000 gallons, brings the cost to $10 per tank car.

In many cases there have been efforts to reduce the expense for making black gasoline by using a less expensive coloring matter that is not sufficiently soluble. Evidently dyes of low solubility are being used, for we have had several reports that the practice is not proving satisfactory due to the dye settling and causing stoppage of the fuel lines, clogging of the carburetors, etc.

I do not know of any other dyes than those mentioned that will give good results and fully meet the conditions of the law.

NATURAL GAS DEVELOPMENTS

Richard G. Soper Now President of Dallas Gas

Richard G. Soper, past vice president of the Dallas Gas Co., was elected president and general manager to succeed the

RICHARD G. SOPER

late Henry C. Morris at a meeting of the board of directors September 13.

L. A. Bickel, who has been assisting Mr. Soper during the past nine years in an operating capacity, was elected secretary.

Mr. Soper has been with the company 25 years, going to Dallas from Michigan in 1909. He had been connected with the Pontiac Light Co. of Pontiac, Mich., a gas and electric utility, and the Jackson (Mich.) Gas Co.

The new president came to the company as secretary the year before natural gas was introduced to Dallas. He became vice president in 1928. Mr. Soper was born in Detroit, Mich.

With his election to the secretaryship, Mr. Bickel achieved the distinction of being the youngest official in the company, and one of the youngest in the industry. Born in Gainesville in 1904, he completed his high school education there and entered Texas A. & M. in 1921, graduating in 1925.

Central Illinois Rates Less With Natural Gas

CHICAGO, Oct. 16—Gas rate reductions ranging from 10 to 20 per cent will be afforded customers of the Central Illinois Public Service Co. in the territory in and around Hoopeston and Canton as the result of the introduction of natural gas in the near future.

The Illinois Commerce Commission granted the necessary permission to the Public Service Co. and the Central Pipe Line Co. enabling them to construct needed lateral lines of pipe. Among the cities to be served, in addition to Hoopeston and Canton, are Macomb, Lewiston and Havana.

Construction of the lines by the Central Pipe Line Co. will be financed by the Central Illinois Public Service Co. through an advance of $107,000 to be secured by a first mortgage on physical property, including rights of way. All revenues received by the pipe line company from the sale of gas to the Central Illinois company for redistribution will be applied monthly to the reduction of the debt.

In granting the permission, the Commerce Commission specified that the new high thermal unit content gas which is to replace manufactured gas must be at least as efficient in service as that now used. It was also required that rates now in effect must be reduced by approximately 10 per cent in the case of domestic consumers and by an approximate 20 per cent in the case of other consumers.

Apache Gas Co. Plans Relocating Gas Line

The Oklahoma Corporation Commission, having granted permission to the Apache Gas Co. to take up 14 miles of 8-inch line which for eight years has been in service north from the city gate at Perry, Okla., the company plans to relay a 16-mile line from the Perry gas fields to connect with the plant of the Central States Power & Light Co. at Stillwater. The Stillwater plant will use the Perry gas supply as a reserve since it obtains its regular gas supply from the Cushing area.

At the recent hearing before John Hassler, gas and electric engineer with the commission, as referee, representatives of the Apache Gas Co. said an 8-year contract with O'Shaugnessy and Haun expires October 21, 1933, and will not be renewed since there is plenty of gas in the Perry area.

Court Grants Temporary Order in St. Louis Case

KANSAS CITY, Mo., Oct. 16.—Judge Otis has issued a temporary restraining order against enforcement of the St. Louis gas rate cut and announced a date for a hearing on the application for a permanent injunction would be set later by Judge Albert L. Reeves.

The application for a restraining order against the Missouri Public Service Commission was filed in the Federal Court by the Laclede Gas Light Co. of St. Louis which seeks to enjoin the enforcement of an order of the commission requiring that the company should reduce its income to the extent of $212,000 a year.

The commission September 21 issued an order for adjustments of the Laclede company's income that would mean a reduction of 3.5 per cent in gas rates for St. Louis patrons served with gas by the company. The attorneys pleaded that the order was illegal, arbitrary and confiscatory in its effect.

Supreme Court Approves Review of Kansas Order

WASHINGTON, D. C., Oct. 16.—The U. S. Supreme Court has granted the petition of the State Corporation Commission of Kansas for a review of the decision of a three-judge Federal court enjoining it from materially reducing the rate which would be paid the Cities Service Gas Co. for gas for 10 Kansas companies.

The commission had ordered the gas company, which supplies gas to local utilities, to reduce the cost from 40 to 30 cents a thousand.

The local gas companies involved include the Wichita, Hutchinson, Pittsburg, Capital, Newton, Girard and Wyandotte gas companies, the Union Public Service and Western Distributing companies.

Revive Effort to Serve Indianapolis With Gas

Renewed effort to bring natural gas to Indianapolis is seen in the filing of a petition by the Indiana Gas Service Corp. with the Public Service Commission for permission to serve natural gas from southwestern Indiana fields for manufacturing purposes. The schedule starts at 50 cents per thousand for the first million feet.

Indiana Gas Service Corp. is an Indiana corporation with Hubert E. Howard, Chicago, president, and John H. Maxon, Buncie, vice president.

Indianapolis is served with artifical gas by the Citizens Gas Co., a city-owned concern. The Indiana Gas Service Co. expects to get its gas from two sources—the Indiana gas field and the Panhandle pipe line, which extends from Amarillo, Tex., to the Indiana-Illinois state line.

Canadian Supreme Court Voids Conservation Act

CHATHAM, Ontario, Oct. 14.—There is still some uncertainty among oil operators as to the exact effect of the recent decision of the Supreme Court of Canada in allowing the appeal of Spooner Oils, Ltd., and A. G. Spooner of Calgary in connection with their test case against the Turner Valley Gas Conservation Board and the attorney general of Alberta.

In this test, the Spooner interests challenged the validity of the legislation restricting the gas flow of wells in the Turner Valley Field.

The trial judge upheld the validity of the act. The Alberta Supreme Court upheld the trial judge but declared that sections of the act providing for a levy to cover the board's expenses were invalid. The Supreme Court decision holds the entire legislation is invalid.

The conservation act set up the board with authority to reduce gas production to a maximum of 200,000,000 feet a day. Each well was tested so as to fix a production limit based on gas-naphtha ratio. Three wells of Spooner Oils, Ltd., were, in accordance with this ratio, reduced in earning capacity from a maximum of $227.20 daily to $14.60, which in effect made the company's leases of little or no value.

The judgment holds that, since Spooner Oils, Ltd., held its lease from the federal government, granted prior to the transfer of natural resources, to the province of Alberta, the conservation act is invalid so far as this company's property is concerned.

R. G. Reid, minister of lands and mines for Alberta, says the decision will not affect the Alberta gas conservation policy, adding: "The department some time ago decided to proceed with gas conservation as part of a provincial scheme under regulations authorized and enacted under the oil and gas wells act of 1931. The Turner Valley gas conservation act, protested by Spooner Oils and now declared invalid, applied specifically to Turner Valley, one area, and it was on this point that the Supreme Court made its ruling. We are now proceeding under the general laws of the province and by the oil and gas wells act we get around the point raised in the Supreme Court's decision."

Earlier in the year the Alberta government transferred control of conservation from the Turner Valley Gas Conservation Board, which automatically passed out of existence, to the petroleum and natural gas division of the department of lands and mines. The latter department adopted a modified scheme of conservation under which the maximum permitted flow of the entire field was increased to about 240,000,000 feet a day; and the incidental requirements of conservation were very much simplified.

It is understood that the Alberta government will institute a further appeal to the judicial committee of the privy council, the court of last resort. The possibility has been mooted of Turner Valley oil producers entering civil actions against the province for compensation for loss of revenue due to curtailment of the naphtha output of the wells. The Supreme Court decision apparently applies only to leases secured from the federal government prior to the transfer of natural resources; though it may apply also to freehold lands.

Review of Operations in New York-Pennsylvania

Since the Oriskany discovery well was drilled, there have been 370 wells started in New York State and northern Pennsylvania and of these wells 168 have been producers, 181 dry holes, 5 inactive, and 16 are drilling. This does not consider the shallow fields at Geneva and Rathbone. Of the producers 115 are located in the Wayne-Dundee closely drilled area.

Production per acre from the Tioga Field, says F. E. Eckert, of Hanley & Bird, Bradford, Pa., producers, in the Gas Age-Record, will apparently be approximately one-fourth of the early estimate of the producers in that district. The production per acre has recently been calculated by the rock pressure-production-decline method using the drilling up western end of the Tioga Field, known as the Ellbridge area. This area, comprising 1,120 acres, has 14 producing wells and is outlined with dry holes on three sides. The initial rock pressure was 1,650 pounds per square inch. On April 1, 1933, the average rock pressure of the wells was 1,150 pounds, showing a drop of 500 pounds, and the total production was 1,763,000,000 feet, which would show an ultimate gas reserve of 5,818,000,000 feet for the 1,120 acres or 5,200,000 feet per acre.

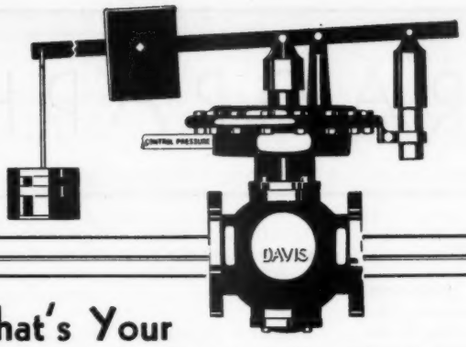
In order to produce all this gas production would have to continue to zero pounds pressure, which can hardly be expected from this field, due to encroaching salt water. In fact, several of the producers which had no showing of salt water when drilled are now making considerable salt water. One well is making so much water that it will undoubtedly be abandoned with a rock pressure of over 1,000 pounds. The yield will therefore be something less than 5,000,000 feet per acre.

Gas is being produced from these fields in large quantities and most of it is being used for industrial purposes. As much as 40,000,000 feet per day has been produced from the Tioga Field and this field averaged 25,000,000 feet per day last winter. Over 6,000,000 feet per day is being produced from the Potter County Field, practically all used for industrial purposes.

UNITED GAS HEARING

AUSTIN, Tex., Oct. 16.—The Texas Railroad Commission will hold a hearing here on October 23 for the purpose of receiving testimony to be used in determining fair and reasonable rates to be charged by the United Gas system for gas at gates of cities served by it.

There is pending before the commission a number of appeals from the rates set by ordinance in cities served by distributing systems of the United Gas system.



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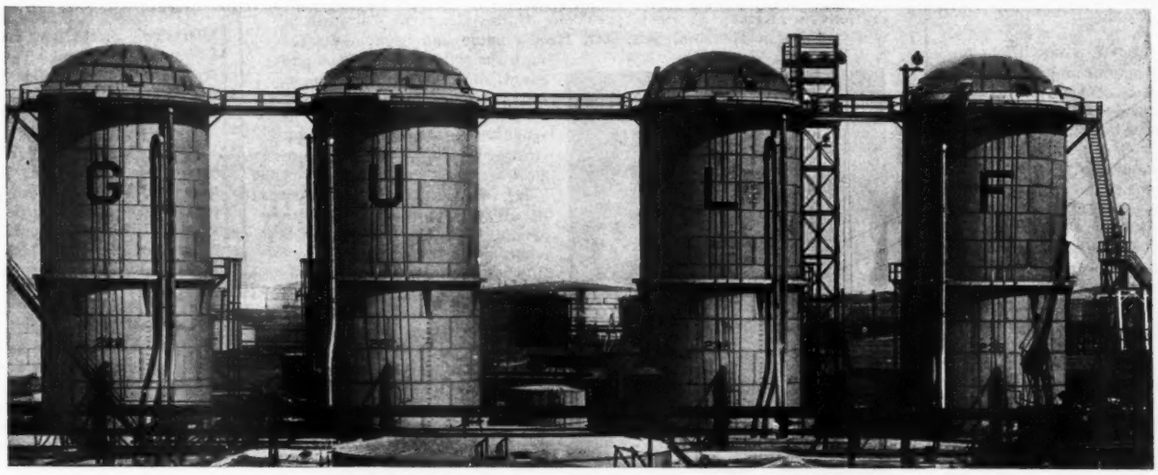

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GULF REFINING COMPANY

PERSONAL PARAGRAPHS

A. D. RYAN, chief investigator for the Department of the Interior in Texas, is moving from Tyler to Dallas and Fort Worth to continue his work.

* * *

SIDNEY A. JUDSON, chief geologist, Texas Gulf Producing Company, Houston, Tex., has returned from a vacation spent in the western part of the State.

* * *

H. C. COCKBURN, independent operator and president of Cockburn Oil Corporation, has returned from an extended visit to New York and Chicago.

* * *

J. S. CULLINAN, chairman of the board of the American Republics Corporation, Houston, Tex., has been in Washington, D. C., in connection with a "back to the farm" movement he is sponsoring.

* * *

NELSON A. ROCKEFELLER, second son of John D. Rockefeller, Jr., underwent an operation 10 days ago for appendicitis. Mr. Rockefeller, who is 25 years old, is out of danger and is recuperating at his home in Pocantico Hills.

* * *

J. N. INGLISH, investigator for the enforcement division of the Federal oil code administration, is in Fort Worth, Tex., investigating numerous reports of violations. He will work with members of the Zone Four Marketing Committee.

* * *

GEORGE S. BAYS, chief engineer, production department, Stanolind Oil & Gas Company, Tulsa, with a party of friends, is spending three weeks hunting deer and black bear in the Sierre Madre Mountains in the State of Chihuahua, Mexico.

* * *

C. R. McCOLLOM, consulting geologist and petroleum engineer, was the principal speaker at the meeting of the Los Angeles Petroleum Accountants Society, taking as his topic, "The Acquiring, Geologizing and Development of Lands and Leases."

* * *

K. A. (GUS) SCHMIDT, geologist for the Tide Water Oil Company, Fort Worth, Tex., who staked location for the test which has shown for a heavy wildcat gasser, and possibly a new oil discovery near Palestine, Tex., is now spending considerable time in the latter city.

* * *

CHARLES A. MIX, of the California Company, is the new president of the Midland Geological Luncheon Club at Midland, Tex. John E. Adams of the same company was named vice president, and Alden S. Donnelly of the Honolulu Oil Company, secretary-treasurer.

* * *

WALTER DAYHUFF, chairman of Standardization Problem No. 1 of the California Natural Gasoline Association, presented a report of the technical committee to members of the Association on "Deviations From Boyle's Law as Affecting the Measurement of High Pressure Gas."

* * *

EUGENE H. BLANCHE, attorney and director of the Middle Dome Corporation, Los Angeles, Calif., who has recently returned from Washington where he conferred with Secretary of Interior Ickes, explained the Middle Dome agreement to members of the Los Angeles Petroleum Accountants Society at the October monthly meeting.

THAD DAY, of Tulsa, recently moved to San Antonio, Tex.

* * *

FRANK R. CLARK, chief geologist of the Mid-Kansas Oil & Gas Company, Tulsa, and president of the American Association of Petroleum Geologists, and Dr. L. C. Snider, chief geologist, Henry L. Doherty Company, New York, and editor of publications of the American Association of Petroleum Geologists, were the principal speakers at the meeting of the Houston Geological Society.

* * *

L. H. JOHNSON, president of Pennzoil Oil Company of California, who has been touring Europe with his family, visited with Pennzoil company officials in Oil City, Pa., before returning to his offices in Los Angeles. Mr. Johnson said he had little difficulty in purchasing Pennzoil abroad, and he pointed out that in comparison with European prices gasoline is practically given away in the United States.

* * *

WALTER C. TEAGLE, president of the Standard Oil Company (New Jersey), was in Cleveland, Ohio last week where he attended the marriage of his niece, Miss Helen Wright Teagle, daughter of Mrs. Frank H. Teagle, to Robert Morrison Clements, son of Mr. and Mrs. Thomas Clements of Phoenix, Ariz. Miss Teagle was escorted by her uncle at the wedding which took place at the Teagle mansion, on October 12.

LOUIS A. SCHOLL, JR., director of the department of geophysics of the Texas Company at Houston, Tex., was in Tulsa on business during the past week.

* * *

ALFRED HURLBURT, vice president of the Republic Gas Corporation, Houston, Tex., is on an inspection tour of the company's properties in the Gulf Coast district.

* * *

J. C. NICKLOS has been placed in charge of the Gulf Coast district of the Continental Oil Company with headquarters in Houston, Tex. He was transferred from Fort Worth, Tex.

* * *

W. G. SWANEY, general manager of Kerotest Manufacturing Company, Pittsburgh, Pa., is in Houston, Tex., after which he will drive to California where he will call on the trade.

* * *

H. M. STALCUP, vice president in charge of production for the Skelly Oil Company at Tulsa, has been supervising the completion of the company's first well in the Livingston Field, Polk County, Texas.

* * *

RICHARD T. LYONS, Tulsa, vice president in charge of the land and lease department, Skelly Oil Company, and Joseph E. Morero, geologist in charge of the Houston, Tex., office, have been making an inspection of the West Texas fields.

* * *

GEORGE J. HANKS, manager of transportation for the Tide Water Oil Company, spent the past week in Tulsa, returning to New York Thursday.

* * *

HUGH BURCHFIELD AND J. W. HOOVER, both with the California Company, Midland, Tex., have been transferred to the Island of Bahrein in the Persian Gulf just off the mainland of Arabia.

* * *

S. B. CRABTREE, independent operator of Tyler, Tex., is another oil man who believes in getting above the tree tops when he wants to speed with safety. He has just purchased a four-passenger de luxe executive model Waco cabin plane powered by a 210-horsepower motor.

* * *

E. DeGOLYER, noted geologist, who resigned his position as chairman of the board of directors of the Amerada Petroleum Corporation several months ago to enable him to give his attention to his private business, was a Tulsa visitor in the past week. His headquarters are in New York.

* * *

W. ALTON JONES, New York, executive vice president of the Cities Service Company; J. C. Van Dusseldorp, of the Holland investment banking house of Heldrig & Pierson; Henry Termeulen, New York representative of the Holland bankers; Mrs. Jones, and Mrs. Van Dusseldorp have been making an air tour of the Panhandle oil field.

* * *

GEORGE H. SHAW, general counsel for Cities Service Company in Denver, Colo., and B. C. ADAMS, vice president and general manager of the Gas Service Company of Kansas City, Mo., were injured when their plane nosed over in a forced landing at Stratford, Tex. Mr. Shaw was able to continue his journey but Mr. Adams was removed to an Amarillo hospital.

ACTIVE IN GULF COAST

One of the younger operators who have figured in Gulf Coast operations is Herman F. Heep, president of the Heep Oil Corporation, with offices in Houston, Tex. Mr. Heep's name has been associated with the wildcatting stages and early development of important fields. He has followed the practice of disposing of most of his holdings to advantage and then moving into new areas.

HERMAN F. HEEP

Mr. Heep's first experience in oil was in 1923 with the opening of the Luling Field, where with associates, he organized the Royal Oil Company which brought in a producer. Selling his interests there, Mr. Heep went to Refugio and in 1925 became connected with the Houston Gulf Gas Company. Next he went with Heard & Heard, teaming contractors in Refugio, as office manager.

In 1928 Mr. Heep obtained a lease in the Refugio Field and was instrumental in the organization of the Texas Gas Company which in 1928 brought in the first oil well in Refugio, all previous production having been gas. He sold his holdings in this company but immediately organized the Heep Oil Corporation, and under this name continued to operate at Refugio until 1930 when he again sold all his holdings. In 1931 he moved to East Texas, operating there for a year.

Soon after the first well was brought in at Conroe, Mr. Heep, operating as the Heep Oil Corporation, went to that field, acquired acreage and drilled Conroe's second well. Late in 1932 Mr. Heep sold all his interests in Conroe to the Tide Water Oil Company, although since then he has acquired an interest in some smaller properties, which he holds.

Mr. Heep was born in Buda, Hays County, Texas. He is a graduate of Texas A. and M. College, and of the University of Wisconsin.

H. E. KARNES, independent operator, Batson, Tex., has returned from a vacation trip to California and New Mexico.

* * *

L. R. HOLMES, manager of refineries for the Texas Company, is spending a vacation at his lodge in the Adirondacks in New York State.

* * *

F. C. METZGER, chief engineer of the Sun Oil Company, Dallas, Tex., and family, are on an automobile tour in the Rocky Mountains.

* * *

M. T. RATHVON, of the Argo Oil Company, has returned to Casper, Wyo., after a trip to Oklahoma where the company is drilling a well.

* * *

HARRY NEWLIN, chief geologist of Darby Petroleum Company, Tulsa, is spending a few weeks in Southwest Texas, with San Antonio and Houston as headquarters.

* * *

H. F. WORLEY, independent oil producer in the East Texas Field and in Oklahoma, is in Houston, Tex., spending considerable time inspecting the Gulf Coast oil fields.

* * *

ARCH W. THOMAS, of Midland, Tex., has been elected chairman, and Paul O. Still of the same city, secretary of the West Texas Rig Building Contractors Association.

* * *

DWIGHT A. DECHMAN has been appointed manager for the Texas Gulf territory for the Warner-Quinlan interests, being transferred to Houston, Tex., from Los Angeles, Calif.

* * *

WILLIAM J. SHERRY, Tulsa oil producer, with Mrs. Sherry and their two children, have returned home from an extended eastern motor trip. They visited the Century of Progress Exposition on their way westward.

* * *

BURT TRIBBLE, of the accounting department of the Stanolind Pipe Line Company, Tulsa, is in Texas on company business.

* * *

A. T. STEWART, assistant general freight agent for the Missouri Pacific Railroad Company, is visiting the traffic offices of refineries in the Tulsa area.

* * *

FREDERICK A. BUSH, chief geologist, Sinclair Oil & Gas Company, Tulsa, is on his vacation in the East, taking in New York City and Washington, D. C.

* * *

W. H. GEIS has returned to Los Angeles, Calif., from Washington, in which city he spent the last month in code work in conjunction with Warner Clark and R. E. Allen.

* * *

H. J. LOCKHART, vice president and general manager, the Parkersburg Rig & Reel Company, Parkersburg, W. Va., is in Tulsa this week upon company business. Mr. Lockhart was in Kansas last week.

* * *

H. L. McMILLEN, of the Independent Torpedo Company, has returned to Michigan after operating in Texas and Oklahoma for the past year and a half. He is making his headquarters at Mount Pleasant.

* * *

GEORGE T. MILBURN, consulting geologist and production engineer of San Francisco and Los Angeles, Calif., is spending several weeks in Texas and Oklahoma oil fields. He will visit the Greasewood area in Colorado and several Wyoming fields.

* * *

HOYLE JONES, president of the Superior Tube Company since 1919, has been made general partner of the brokerage firm of Fenner, Beane & Ungerleider, and is now the resident partner in Tulsa, with headquarters in the National Bank of Tulsa Building.

D. J. MORAN, president of the Continental Oil Company, New York City, was a visitor in Houston, Tex., last week.

* * *

P. P. GREGORY, umpire at the Yates Pool, Pecos County, Texas, was a business visitor in Breckenridge and Dallas, Tex., recently.

* * *

JOHN TUCKER, superintendent of production, Gulf Production Company, Houston, Tex., has returned from a vacation trip to the East, where he visited his son at Cambridge, Mass. On the way home he took in the World's Fair in Chicago.

* * *

WILLIAM McVAY AND CHARLES McVAY, of McVay Brothers, oil producers, Bradford, Pa., and Mrs. Charles McVay and her three sons, have returned from a motor trip to New York and Washington, where they attended the world baseball series.

* * *

L. L. BECHTEL, superintendent of production in Kansas for the Stanolind Oil & Gas Company, has been transferred to the same position in the Salt Creek Field in Wyoming, and Lee Worth has been transferred from Texas to succeed Mr. Bechtel in Kansas.

* * *

GLENN HARROUN, "flying" production superintendent for the Sinclair Prairie Oil Company, and A. A. Arras, representative for Black, Sivalls & Bryson, Inc., both of Fort Worth, Tex., just returned from an air tour of West Texas and the Panhandle.

* * *

LEO C. HARPER, for many years operating in the San Antonio, Tex., district but for the past few years in California, has arranged to transfer his headquarters back to San Antonio. He lately returned to California for a couple of weeks to attend to matters.

G. RAYMOND, of Black, Syvalls & Bryson, Tulsa, is making a trip through the Texas fields, visiting the company's offices at Fort Worth and Houston.

* * *

C. A. PRICHARD, purchasing agent, Mid-Continent Petroleum Corporation, spent several days recently on a business trip to St. Louis, Mo., and Terre Haute, Ind.

* * *

RALPH STEINMAN, scout for Sinclair Prairie Oil Company, made a trip to San Antonio and Southwest Texas recently, later leaving for Midland and West Texas.

* * *

D. A. CURTIS, president of the Empire State Oil Company, is at the offices of the company in Casper, Wyo., after spending several months at his home in Jamestown, N. Y.

* * *

GEORGE FOSTER, of the Devonian Oil Company, Tulsa, has completed a trip to West Texas looking over company properties in the newly opened Ector County area.

* * *

E. J. NICKLOS, of Ponca City, Okla., vice president in charge of production of the Continental Oil Company, was in Casper, Wyo., last week, having made the trip by airplane.

* * *

CAPT. THOMAS G. RICHARDSON, for some time past with Imperial Oil, Ltd., at Sarnia, Ontario, will leave shortly for Barranca, Colombia, under a two-year contract with the International Petroleum Company.

* * *

COL. HAROLD B. FELL, assistant to Wirt Franklin of Tulsa, president of the Independent Petroleum Association of America, and C. E. Buchner, executive manager, recently conferred with operators of East Texas at Tyler.

* * *

N. A. BEST, manager for the Mid-Continent district, for Dowell, Inc., Midland, Mich., has moved his office from Shreveport, La., to Tulsa.

* * *

JOHN D. P. ELDER, of Junction City, Ohio, veteran operator, spent a few days looking over the Central Michigan Field.

* * *

R. SEIBEL, secretary-treasurer of the Texas Pacific Coal & Oil Company, Fort Worth, Tex., and family, are spending a vacation in Chicago.

* * *

WILLIAM C. McDUFFIE, receiver in equity for the Richfield Oil Company, expects to leave Los Angeles, Calif., for the East within a few days.

* * *

T. A. HALL, engineer, production department, Tidal Oil Company, Tulsa, has recently returned from an automobile vacation trip that took him and his family as far east as Norfolk, Va., with numerous stops and visits at towns and cities in Ohio and West Virginia.

* * *

FRED HOUGH, of the Southern Counties Gas Company, and T. K. M. Smith of the Industrial Fuel Supply, discussed the papers presented at the last monthly meeting of the California Natural Gasoline Association, and presented their problems to an open meeting for general discussion.

* * *

MISS DOLLIE RADLER, daughter of Mrs. Blanche Radler, of Bentonville, Ark., was married to Charles S. Hall, of Tulsa at her monther's home on October 9. Mr. and Mrs. Hall are now on their wedding trip which will take in the World's Fair at Chicago and the groom's old home in Missouri. They will make their home in Tulsa upon their return about November 1. Mrs. Hall is a graduate of the University of Oklahoma and a member of Phi Beta Kappa and is administrative geologist for the Amerada Petroleum Corporation in the Tulsa office.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

October 18, 1908

The Prairie Oil & Gas Co.'s new 8-inch line from northeastern Oklahoma shallow fields is handling about 22,000 bbls. daily. The company is preparing to extend its lines into Osage and Tulsa Counties and will run an 8-inch line from Ramona to the Glenn Pool.

S. A. Giraud has been promoted to be assistant auditor of the Gulf Pipe Line Co. at Beaumont, Tex.

J. R. Sharp, of the Producers Oil Co., Tulsa, is touring Europe.

20 Years Ago

October 23, 1913

The pipe line capacity of the Magnolia Petroleum Co. between Corsicana and Beaumont, Tex., is being doubled.

Dr. Rudolf Diesel, inventor of the Diesel engine, is dead.

John J. Harvey, auditor for the Standard Oil Co. of New Jersey, and Miss Alice G. Seep, daughter of Joseph Seep, head of the Seep Purchasing Agency, are married in Titusville, Pa.

Francis Eugene Hammond, who with F. W. Hayes, drilled the first gas well in the Allegany Field in New York State, dies at his home near Cuba, N. Y. The well was drilled on the Bartoo farm, near Clarksville, Allegany County.

The largest individual oil deal yet made in the Mid-Continent Field is said to have been the recent sale of Frank B. Ufer's oil and gas holdings in Kansas and Oklahoma to P. F. White and Harry F. Sinclair, of the firm of White & Sinclair. The exact price was not made public. Mr. Ufer intends to retire from the oil business. He recently resigned as a director in the Exchange National Bank of Tulsa.

10 Years Ago

October 18, 1923

Rodney Alexander is appointed secretary of the Pennsylvania Grade Crude Oil Association.

Thomas M. Galey, in a brief history of the Mid-Continent Field, says the first oil well in Kansas was completed west of Paola in 1888, but the first gas well came in in 1882, east of Paola. The first well drilled in Kansas was in 1860, also near Paola. The first commercial oil well in Kansas was completed in 1893 in the city of Neodesha. It made 12 bbls. the first 24 hours after a shot.

K. C. Heald, emphasizing the importance of better production methods, estimates that on an average 80 per cent of the oil in oil-bearing formations is still left there when wells are abandoned.

F. J. Hartman, of Cygnet, Ohio, has been made chief engineer of the Imperial Pipe Line Co. at Wayne, Mich., which runs from Cygnet to Wayne, Mich., where it connects with the Canadian end of the line running to the Imperial refinery at Sarnia, Ontario.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Can as Much Gas Be Returned to Sand as Was Taken From It?

Perhaps you can give me some information on a point which has given rise to discussion here. There is a difference of opinion as to whether it is possible to return to depleted sands as much gas as was taken from them in the regular course of producing the field. Probably repressuring operations have yielded this information, but we have not been able to find anything covering the point.—E. E. E.

Engineering opinion does not seem to support any theory that as much gas actually is returned to a sand as was taken from it in producing operations, although the possibility of doing it under certain conditions is conceded. For the following discussion of the subject this department is indebted to Prof. L. D. Roberts, of the Colorado School of Mines:

"Data on repressuring operations in certain Texas fields indicate but do not show definitely that it is impossible to return to depleted or partly depleted sands a volume of gas equal to that previously removed. Four geologic factors are believed to be responsible, at least in part, for the apparent difference between the volume of gas taken out of the formations and the volume of extraneous gas which ordinary repressuring operations return to the sands.

"These factors, arranged in the order of their importance are (1) time, (2) water encroachment, (3) slumping, and (4) recementation.

"Although the time factor is of paramount importance in repressuring operations, petroleum engineers have been disposed to treat it too lightly. It must be remembered that during the early life of a field, gas is withdrawn from the reservoir sands through a relatively large number of wells, whereas during repressuring the ratio of injection wells to producing wells is from one to five, or greater.

"In order then to repressure a field where there is but one injection well to every five or more producing wells it would be necessary to return gas to the reservoir formation at a rate at least five times greater than that at which the gas was originally produced from the average well. Since the flow of gas through a restriction or opening between two reservoirs, one of which is the well and the other the pore spaces in the reservoir sands, varies as the square root of the differential pressure and as the absolute static pressure, it is evident that there is a maximum rate for a given injection pressure and number of intake wells at which a field can be repressured.

"The volume of gas which a depleted or partly depleted sand is capable of taking during a given period is dependent also upon the character of the reservoir formation. Every formation contains streaks of more or less loose and tight sand. The loose streaks fill with gas rapidly, but it takes time to fill the voids in the tighter portions of the sand. If injection pressures are maintained for a sufficient length of time, it should be possible, provided of course that the pressures are as high or higher than the original formation pressure and other shrinkage factors do not interfere, to return the original volume of gas to the reservoir sands. The distribution of energy and pressure in a depleted sand is a slow process at best. It can be hastened to some extent by increasing the injection pressure or by using a large number of injection wells; but in any event a long time, and in the average reservoir sand perhaps years, will elapse before original conditions can be restored.

"That 100 per cent return of gas to the reservoir, even where sufficient time has been allowed, is not always possible in depleted oil sands is sometimes due to water encroachment. Water which has migrated into the depleted areas of a sand reduces appreciably the volume of pore space available for injected gas.

"Slumping of the sand formation is held by some engineers to be a factor in reducing the pore spaces in reservoir sands and is considered by them to be one of the reasons why certain formations did not take as much gas as they held originally. In a producing formation having a high initial pressure and no edge water, it is probable that subsidence may contribute to pore space shrinkage on depletion of the oil and gas from the formation. High-pressure fields without edge water, however, are of rare occurrence. In those fields which are surrounded by edge water, as, for example, the Gulf Coast fields in Texas and the majority of the fields in California, slumping of sand formations after the extraction of oil and gas seems but a remote possibility. In considering reservoir sands which are surrounded by edge water many engineers are of the opinion that if the pressure of the overlying formations was great enough to compress the depleted sand bed the pressure would be more than enough to supply the required differential between the water and the depleted sand to cause the water to replace the extracted gas and oil before compression of the sand took place.

"Although recementation in the reservoir sands has been offered as a possible factor in pore space shrinkage, no substantiating data for or against this theory are available at this time."

Reducing Unlawful Production by Bottom-Hole Pressure Method

I heard a statement made to the effect that in a field where the bottom-hole pressure method of proration was practiced it would be more difficult for operators to produce oil illegally. Can you tell me whether this is true or not?—O. E. T.

It is believed that adoption of the bottom hole pressure method of proration would result in marked diminution of illegally produced oil. James O. Lewis and Harry F. Wright, who presented a discussion of the bottom hole pressure method of prorating oil and gas fields before a production division meeting of the American Petroleum Institute, touched on this phase of the subject as follows:

"Such a plan would expedite the work of such agency as might be charged with the supervision of production and largely reduce the opportunities for producing considerable quantities of illegal oil. The production of any considerable amount of illicit oil would result in excessive loss in pressure. During the ensuing period that operator's pressure allowable would be less and his ratio less, thus severely cutting down his allowable. Whether or not his illicit runs were ever detected directly it is certain that the finger of suspicion would be pointed toward him, and in a short time he would be faced with vanishing allowable that would make it impossible for him to continue overproducing.

"Suppose an operator was allowed 30,000 bbls. and 100 pounds pressure decline, and that he took illicitly an additional 15,000 bbls. His pressure drop would then be about 150 pounds, or 50 pounds below his neighbors who had operated their properties legally. At once operator "B" would be under suspicion, and during the next period his runs would be 30,000 bbls. (the official runs) divided by 150 pounds, equals 200 bbls. per pound instead of 300 bbls., and his total allowable only 10,000 bbls. for the period instead of the 30,000 bbls. to which he would have been entitled had he run only legal oil.

"It is obvious that the sins of the illegal operator would soon find him out. By being held down in his allowable for the second period to 10,000 bbls. his total recovery for the two periods, both legal and illegal together, would be 55,000 bbls., whereas he could have taken 60,000 bbls. had he observed the rules. This self-detecting and correcting feature would work out particularly in fields with gas as the principal expulsive agent, but even in loose sand fields like East Texas it would operate to greatly reduce the opportunities for illegal running of oil."

Hookup Suggested to Keep Well in Continuous Production

I am interested in a well 3,450 feet deep, finished with 5-inch casing cemented on top of the sand and 2-inch tubing run to the bottom without a packer. The well does not have enough gas to flow steadily but when closed in and the pressure on the casing reaches between 500 and 600 pounds will flow 16 or 18 bbls., and the same thing can be repeated 12 hours later. Near the end of each flow, however, the gas breaks through the fluid and there is quite a loss of gas.

The tubing was run with a pumping barrel near the bottom and I have been wondering if one-half inch tubing on the bottom with a one-quarter inch choke seated in the barrel, the one-half inch tubing to be increased to three-quarters inch at a certain depth and brought to the surface with 1-inch with a check valve where the 1-inch ties on to the three-quarters inch, and where the three-quarters inch ties on to the one-half inch would not make the well flow steadily. I do not know, however, how many feet of one-half inch, three-quarters inch and 1 inch should be run in order to get the best result from the expansion of the gas as the load is reduced. I also do not know whether it would be better to have a one-quarter inch choke on the bottom, three-eighths inch or a one-half inch.

With the well completed in this way, is it known how much pressure would have to be on the casing to flow it to best advantage?—E. S. G.

Engineers who have had experience with tapered tubing strings suggest the following procedure for your well:

First pull the string of 2-inch tubing and rerun it with a bottom packer between casing and tubing.

When this has been done run a straight string of 1-inch tubing inside the 2-inch. This string should prove suitable to keep this well upon steady production with lowered gas-oil ratio.

No valves of any kind are recommended for the 1-inch tubing. The velocity of the gas and the gas-oil ratio through this string of small tubing should be such as to produce the oil continuously.

This makes a simple hookup and the engineers consulted state that with wells on their properties that are similar to yours, in so far as they can tell from the information furnished, such a string will keep the well in continuous operation for two to three years.

Why Was It Called That?

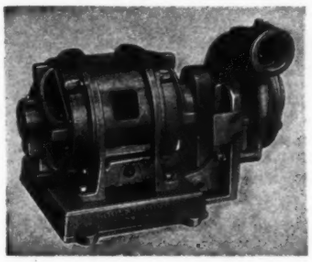
FLYWHEEL

The flywheel, familiar in the oil field as a speed-regulating device, usually consists of vanes, or heavy arms, on a rotating shaft. Although the origin of the name is obscure, a suggestion of how it came to be adopted is found in Moxon's "Mechanical Exercises," published in 1703: "The fly is made with two, sometimes with four arms from the center axis." A somewhat similar allusion is made by Watt in a book published in 1782. It is believed likely that the winglike appearance of these arms, swinging about on a revolving axis, conveyed the idea of flying.

NEW AND IMPROVED EQUIPMENT

Motor-Centrifugal Pump Is Announced by Goulds

Compactness and high efficiency have been combined in the motor-centrifugal pumping unit announced by Goulds Pumps, Inc., Seneca Falls, N. Y. A new



close-coupled type of mounting is used which permits the use of standard motors without special bedplates and brackets. Pump bedplate extends under motor relieving the motor of excessive strains.

Pumps are built in sizes three-quarters to 4-inch, for capacities up to 1,000 g.p.m. Heads range from 10 to 290 feet. Complete description, with comprehensive selection chart for both 1,750 and 3,550 r.p.m. speeds, is given in Goulds new Bulletin 204, sent on request. The application of these new pumps to the petroleum industry are many and varied.

Shipping Boxes to Fit All Sizes and Shapes of Cans

To meet the need for the various sizes and shapes of cans, the Hinde & Dauch Paper Co., Sandusky, Ohio, has developed a wide range of corrugated fiber shipping boxes for canned oil. Boxes have been developed to carry every shape, size and quantity up to the maximum, whether the cans are round or rectangular.

These shipping boxes are strong, light in weight and durable. They can be imprinted in bright colors to form a "miniature billboard" in transit, as well as furnishing an excellent means of company identification.

Since the primary purpose of canned oil is to prevent substitution and pilferage, H. & D. shipping boxes are firmly sealed so that the slightest sign of pilferage could be easily detected.

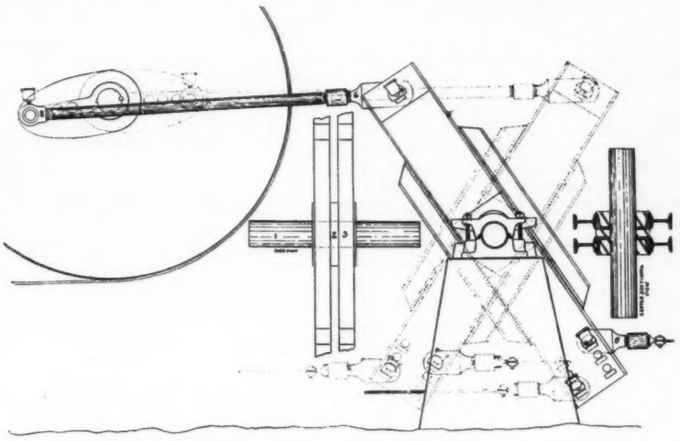
WESTON PHOTRONIC KIT

The Weston Electrical Instrument Corp., 614 Frelinghuysen Avenue, Newark, N. J., has announced a photronic control kit especially for engineers and manufacturers who prefer to do their own experimenting with photoelectric control for mechanical equipment, operations and for processes of various kinds. The kit contains equipment necessary for the engineer to start immediate experiments, together with diagrams of connections. The equipment can be used as a smoke detector, burglar alarm, turbidity detector, door opener, counter for all classes of service, safety device on machines, etc.

NYE PIPE TOOL CATALOG READY

Catalog No. 33, issued by the Nye Tool & Machine Works, 3120 Fullerton Avenue, Chicago, a 68-page attractively printed booklet, is ready for distribution among those interested in the Nye line, which includes dies, die stocks, pipe-cutters, vises, tool chests, pipe-reamers, pipe-taps, threading machines and accessories. A page of helpful hints on the care of dies offers valuable suggestions.

Stroke Adjustment Places Rod Lines on Ground Level



The Oil Field Engineering Corp., Fort Worth, Tex., has developed the Ofeco Lo-Line back side pumping unit to meet requirements for a unit having a variable stroke adjustment that would place the rod lines on the ground level.

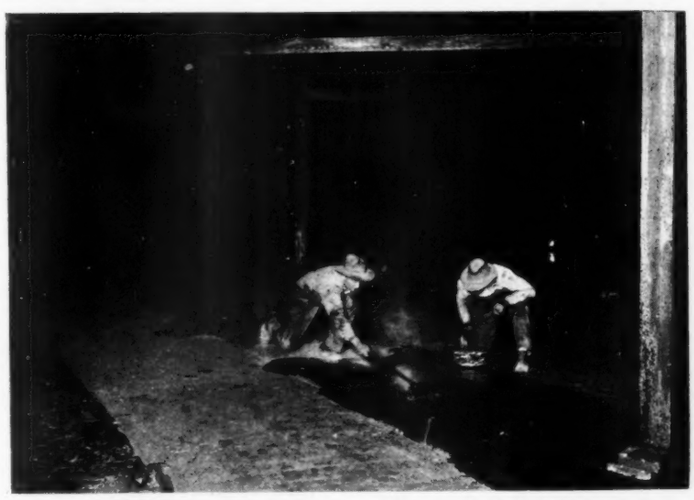
The unit incorporates a variable stroke adjustment that enables the operator to secure a 12-inch variation in surface stroke at the unit. A series of six adjustments are possible.

The unit is substantially built and electrically welded throughout. Every moving part is equipped with a removable bronze bushing that operates on a tool steel pin, which is spindle bored and lubricated from an oil cup having a generous reservoir.

Charles F. Norton, formerly vice president and general manager of the Howell Electric Motors Co., is now associated with the Louis Allis Co., Milwaukee, Wis., in an executive sales capacity.

A three-day convention of Federal truck distributors and branch managers from all parts of United States and Canada at the factory in Detroit featured the introduction of four new six-wheel trucks.

Bottoms Covered With Natasco Free From Corrosion



Applying Natasco bottom cement to a 55,000-barrel bottom

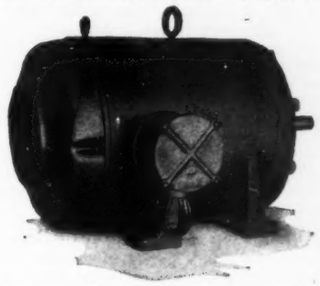
Tanks recently emptied of oil which they had contained four to five years are reported to have revealed bottoms unaffected by corrosion where these bottoms had been treated with Natasco plastic cement, a product of the National Tank Seal Co., Tulsa. Only time and actual field service can establish the real value of a material of this kind, so the demonstration afforded by these tanks should be of peculiar interest to tank owners.

Old leaky bottoms are reconditioned, made leak-proof and corrosion-resistant with this material, which is designed to protect the bottom steel plates from corrosion caused by electrolysis and against the attacks of other corrosive elements.

The manufacturers say Natasco cement is not affected by direct contact with crude oil and no overlayer of water is necessary, conserving valuable storage space which otherwise would be wasted. Application of this material to new steel bottoms is said to insure long life.

Enclosed and Fan-Cooled Motor Now Made by Ideal

The Ideal Electric & Manufacturing Co. of Mansfield, Ohio, has developed a new totally-enclosed, fan-cooled motor of



the same size as the ordinary open-type motor of the same rating.

Full protection is provided against explosive or abrasive dust, corrosive gases or fumes, current-carrying dust, and steam or moisture. For this reason the motor is especially suitable for use in oil field, steel mills, metal working plants, foundries, chemical plants, etc.

The construction employs two shells, the inner shell being dust-tight and enclosing windings and rotor. Tight sealing is obtained by machined metal-to-metal stationary joints with long close fits. There are no running seals. A fan mounted outside this shell forces a blast of air between the inner shell and the outer one, providing effective cooling.

These motors are made in all sizes from 1 to 200 horsepower as squirrel cage induction motors to meet all classifications of torque and inrush requirements and with one, two, three or four speeds. They are available also as across-the-line-start motors up to 200 horsepower and can be supplied for power factor correction as 100 or 80 per cent power factor induction motors in all sizes. Descriptive literature is available.

COMPANIES UNIFY ACTIVITIES

The Superheater Co., New York, has acquired an interest in and assumed the management of the Air Preheater Corp., Wellsville, N. Y., manufacturer of Ljungstrom air preheaters. The Air Preheater Corp. retains its corporate identity under new management, and will continue the manufacture of its products at its Wellsville plant. H. S. Colby will remain in the organization as vice president. Its executive offices will be consolidated with those of the Superheater Co. at 60 East Forty-second Street, New York. Air Preheater sales activities will be co-ordinated with the industrial department of the Superheater Co., with headquarters at that address. William T. Conlon has been made manager. The new officers of the Air Preheater Corp. follows: F. A. Schaff, president; H. S. Colby, vice president; M. Schiller, vice president and treasurer; T. F. Morris, secretary and assistant treasurer; H. S. Marshall, assistant secretary and assitant treaurer. The directors are George L. Bourne, chairman; W. L. Batt, H. S. Colby, R. M. Gates, F. A. Schaff and M. Schiller.

OXWELD ALUMINUM FLUX

Oxweld aluminum flux is announced by the Linde Air Products Co., 30 East Forty-second Street, New York. This new flux is intended to replace the two previously marketed, one for welding pure aluminum and the other for welding aluminum alloys. According to the manufacturer it formerly required two separate fluxes.

California Fields

(Continued from Page 53)

age can be increased from time to time if developments warrant.

Fruitvale

Two new wells were chalked up in the Fruitvale Field of Kern County during the current week, although neither registered substantial production. Cascade Petroleum Co. has listed No. 2 Hasson for completion as a 310-bbl. pumper from 3,777 feet. Kernco Oil Co.'s No. 2 was brought in on the beam pumping 228 bbls. of 22.1 gravity oil per day from 3,762 feet after the hole had been finished with a 6⅝-inch liner carrying 130 feet of perforated. The Associated, which has been experiencing considerable difficulty with water in No. 1 Williamson, a joint project being drilled in the Lost Hills Field of Kern County in conjunction with other operators, has decided to land a string of casing on bottom at 6,041 feet. During the early part of the week this well started to flow at the rate of 50,000 bbls. of salt water per day. The Associated has done an unusually careful job of drilling on this project and consequently anticipated this high head of water. The only unfavorable factor encountered up to the present is that this water sand was expected to be encountered somewhat higher up in the hole.

In the North Belridge Field of Kern County the Continental Oil Co. got a water well in No. 2 Result, which was deepened from 5,475 feet to 5,538 feet, and while this project came in flowing 2,500 bbls. of salt water, this bottom water can be shut off by plugging back to the Temblor. The General Petroleum has not yet passed out of the brown shale in No. 1 Berry, a deep test which the company is driling in the South Belridge Field of Kern County, and consequently the status of this well must be held in abeyance. In the Mount Poso Field of Kern County, the General Petroleum completed No. 1 Glide pumping 341 bbls. per day from the second Vedder zone at 1,888 feet and will probably finish No. 47 Heisen within the next 10 days. There are two other wells nearing completion in this field at present, one of which, George W. Shearer's No. 1, may be finished in the upper Vedder zone. The Union Oil Co. is making exceptionally fast footage in its Union Avenue wildcat and, if the present rate of drilling is maintained, should reach the Kern River series or Santa Margarita within the next 30 days.

Ventura Avenue

The General Petroleum has not yet overcome the water problem that has been holding up completion of No. 15-A Barnard in the Ventura Avenue Field and further work may be required. This deep well was given a production test during the early part of the week but output after the well had been plugged back from 9,000 feet to 8,474 feet still showed a cut of approximately 20 per cent. The latest production figures on this well, which has consistently showed a high water cut after being plugged back by stages, was 2,997 bbls. per day. The Bolsa Chica Oil Co. started deepening operations on No. 5 Hartman recently and this well has been showing up unusually promising and may possibly show substantial production. No. 5 Hartman has been deepened to 7,525 feet and the company is redrilling at 7,356 feet. The Continental Oil Co. has shut in No. 2 Grubb, a recent completion in the San Miguelito Field of Ventura County in order to observe requirements of the oil umpire's office with respect to curtailment.

Only one well was put on production in the Long Beach Field of Los Angeles Basin during the current week, but a check of development work under way indicates the probable completion of several additional producers within the next few weeks. The well finished during the present week was Ohenstein & Withers' No. 1 Baehr, which was brought in on the beam pumping 161 bbls. of 26.6 gravity oil per day from 4,425 feet. Yankee Oil Co., a wholely owned subsidiary of the Republic Petroleum Co., was forced to pump in heavy mud in its No. 1 Signal in the Long Beach Field when the well blew in unexpectedly a day or so ago. The Yankee's well, bottomed at 6,221 feet but plugged back to 6,175 feet, came in barefoot from 180 feet of open hole but was easily brought under control. Failure of the Union Oil Co. to develop commercial production in No. 4 Vidor in the Playa Del Rey leaves only two incompleted drilling projects under way as work was suspended on this well at 5,865 feet.

Canadian Fields

(Continued from Page 58)

eral small gas shows have been encountered.

Operations in Ontario

In Norfolk County, Ontario, the Erie Gas Co. of Toronto has finished a small gasser between Tillsonburg and Simcoe.

In the Dawn Field, Lambton County, Union Gas Co.'s No. 67, Lot 24, Concession 9, Dawn Township, has replaced the outfit destroyed by fire, and will fish for tools. Gas production estimated at 1,250,000 feet was struck in the top of the Dawn sand. Union's No. 68, SE SE, Lot 25, Concession 2, Dawn Township, ready to spud. Union's No. 69 has been located farther west, in Lot 24, Concession 5.

Sarnia Oil & Gas Co.'s No. 1, Lot 7, Concession 3, Sarnia Township, near Bunyan, is reported drilling at 1,500 feet. At Port Frank, in Bosanquet Township, Walker Oil & Salt Syndicate's No. 1 is reported around 1,250 feet.

In Kent County, Olga Oil & Gas Co.'s No. 7, Earl Flook farm, Lot 19, Concession 8, Raleigh Township, has been abandoned after getting a very small gas flow, estimated at 8,000 feet a day, at 1,635 feet. In the Tilbury Field, Salina Oil & Gas Co.'s No. 5, Roy N. Seal farm, Lot 19, Concession 13, Tilbury East Township, is below 600 feet. In the Dover Field, Raleigh Development Syndicate's No. 1, Stephens farm, Lot 2, Front Concession, Dover Township, is standing after running 2-inch casing to the producing horizon in the Trenton.

Bothwell Boom Wells

In the old Bothwell Field, two old producing wells south of the town and close to the Moraviantown bridge, have been cleaned out, and are reported making 10 and 20 bbls. a day respectively. It is claimed these wells date back to the first Bothwell boom of 1866 when James Lick drilled his famous gasser. This well, on what is known as Lick's ravine, close to the Kent-Middlesex County line, struck oil after Lick had practically gone broke drilling unsuccessful tests along the River Thames. Lick, who afterward died in extreme poverty, is reputed to have refused $100,000 for the well. The strike started a boom which transformed Bothwell, in a few weeks, from a small hamlet to a city of 6,000 people. The boom, however, was short lived. Much of the oil was "top show" stuff and did not last, and the Fenian raids on Canada and the consequent threat of war led the Americans, who were largely responsible for the drilling operations, to abandon the field. Later, about 1896, Frank Carman developed the present Bothwell Field, southwest of the town. The successful results of the recent reconditioning operations may lead to more extensive work in the old area.

In Essex County, Bon Jasperson's No. 1 test, Lot 14, Concession 2, Maidstone Township, is reported drilling below 2,150 feet, in a blue lime.

In the Haldimand Field, the North Cayuga Gas Syndicate is drilling on the Thomas and John Glenny farms near Dunnville. Tests are for gas, which is expected at comparatively shallow depth. Officers are: President, Thomas Glenny; vice president, John R. Glenny; general manager, Dr. F. Bourne Lake; secretary-treasurer, Dr. Agnes G. Lake; auditor, Mrs. N. B. Glenny.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 47)

WOODRUFF COUNTY

John Wadkins' No. 1 Rosser, Sec. 7-5n-2w ..... Began drlg. Sept. 2; cmtd. 10-in. 40 ft.; S.D. 1,300 ft.

Mississippi

JONES COUNTY

Snow-Black Pet. Co.'s No. 1 Watson, 600 ft. W, 210 ft. S, center, Sec. 24-7-13 ..... S.D. 4,387 ft.

LAMAR COUNTY

Lamar Oil Co.'s No. 1 Scott, NE NE Sec. 18-2n-14..... S.D. 3,010 ft.

MADISON COUNTY

H. A. Wilson,tr.'s No. 1 Copex, 200 ft. N and E, SW cor. SW NE Sec. 24-9-3e ..... Drlg. sandy shale 1,710 ft.

NEWTON COUNTY

Bob Dalton et al's No. 2 Majura, SE SE Sec. 25-6-11 .. S.D. 2,300 ft.

RANKIN COUNTY

Hill Bros. and Cleve Love's No. 1 Lancaster, C SW NW Sec. 27-5-5e ..... Derrick.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, Sec. 24-2n-9e, SW cor. SW SE ..... Derrick pattern.

WARREN COUNTY

Orbet Drlg. Co.'s No. 1 R. L. Parker, 300 ft. E, CWL, Sec. 14-14-1e ..... Began drlg. Sept. 25; cmtd. 10-in. at 640 ft.; T.D. 729 ft.

Louisiana-Arkansas Proven Areas

North Louisiana

BOSSIER PARISH

Company, well, farm name, section and block—	Remarks
United Gas Public Service Co.'s No. 3 Skannel, Sec. 14-14-12	Drlg. 1,277 ft.

CADDO—BETHANY

Tom Collins Pet. Co.'s No. 1 Gill & Lipscomb, 660 ft. N, 1,506 ft. E, SW cor. Sec. 17-16-16	Derrick.
O. & G. Co.'s No. 1 Taylor, SW SE Sec. 34-17-16.	Drlg. 2,000 ft.
Dillingham et al's No. 1 Eady est., 660 ft. S and W, NE cor. SE NE Sec. 33-16-16	Rigging up.

CADDO—HOSSTON

C. D. Whittaker et al's No. 2 Barker, 1,150 ft. N, 1,900 ft. E, SW cor. Sec. 21-22-15	Drlg. 100 ft.

CADDO—RODESSA

Ark. La. P. L. Co.'s No. 1 Williams & Windham, Sec. 4-22-16, 660 ft. S, 660 ft. E, NW cor. NE NW	Dry and abd. 6,659 ft.

DE SOTO PARISH

Tom McKinney et al's No. 1 J. M. Nabors, 330 ft. N and E, SW cor. SE SE Sec. 26-12-12	Rig up.

OUACHITA PARISH

Century Carbon Co.'s No. 3 Stoughter, 1,980 ft. E, C Sec. 24-19-4	Comp. Oct. 4; 500,000 ft. gas; T. D. 2,205 ft.

RICHLAND PARISH

J. C. Prine's No. 1 Boughton, 1,360 ft. N, 1,920 ft. W, C Sec. 4-15-6	Cmtd. 6-in. 2,300 ft.
United Carbon Co.'s No. 1 J. A. Noe, 1,320 ft. S, 660 ft. E, C Sec. 14-17-5	Comp. Oct. 9; 8,604,000 ft. gas; rock pressure 970 lbs.; T.D. 2,410 ft.

SABINE PARISH—ZWOLLE

D. D. Alexander's No. 2 Cooper, 660 ft. S, 330 ft. W, NE cor. NW NE Sec. 31-8-11	Comp. Oct. 4; pumping 50 bbls.; T.D. 2,343 ft.
Baird Bros.' No. 1 Trammell, 600 ft. N, 330 ft. W, SE cor. NE Sec. 30-8-11	W.O.S.R. 2,606 ft.
Baird & Reed's No. 1 Dew, 330 ft. N, 210 ft. E, SW cor. SW SE Sec. 22-8-11	Dry; W.O. 2,580 ft.
J. C. Chandler's No. 1 Rains, SW cor. NW Sec. 14-7-11..	Repairing rig.
Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-12	Set 6-in. 2,426 ft.
Investors Prod. Co.'s No. 1 S. J. Williams, 660 ft. E and S, NW cor. Sec. 24-7-11	Set 4½-in. csg. 2,641 ft.
T. E. Kelly's No. 1 McClanahan, 1,000 ft. S, 330 ft. E, NW cor. SW NW Sec. 36-8-11	Dry and abd. 2,608 ft.
Pelican Nat. Gas Co.'s No. 21 La. Long Leaf Lbr. Co., 660 ft. N, 568 ft. W, SE cor. SE SW Sec. 3-7-11.....	Dry; W.O. 2,700 ft.
Pelican Nat. Gas Co.'s No. 24 La. Long Leaf Lbr. Co., 330 ft. N and E, SW cor. Sec. 5-7-11.....	Bailed dry; W.O. 2,750 ft.
H. C. Pitts' No. 1 Trammell 330 ft. N and E, SW cor. NW NE Sec. 5-7-11	Derrick.
Pugh-Hickman Drlg. Co.'s No. 9 Stille, Sec. 16-7-11, 330 ft. S and E, NW cor. SE NW	Tested dry 2,518 ft; S.D. for wtr. 2,518 ft.
People's O. & G. Co.'s No. 1 Raines, 330 ft. N, 100 ft. W, SE cor. NE Sec. 15-7-11	Drlg. 1,750 ft.
H. Reeves et al's No. 1 Ponder, 330 ft. N and W, SE NW Sec. 15-7-11	Comp. Oct. 4; pumping 75 bbls.; T.D. 2,675 ft.
Rig Oil Co.'s No. 1 Walden, 330 ft. N and E, SW cor. NW NE Sec. 28-8-11	Derrick.
C. T. Ruffin's No. 1 McNeely, 510 ft. S, 330 ft. W, NE cor. NE NE Sec. 7-7-11	Set 6⅝-in. 2,354 ft.; arranging to drill plug.
L. J. Tillery's No. 1 Sabine Lbr. Co., 800 ft. S, 220 ft. W, NE cor. Lot 3, La. Nava grant, Sec. 5-7-11.....	Rigged up and S.D.
C. H. Tuttle's No. 4 Byrd, 800 ft. S, 920 ft. E, NW cor. NW NW Sec. 7-7-10	Began drlg. Oct. 5; set 10-in. 40 ft.; repairing rig; T.D. 1,020 ft.

Arkansas

UNION COUNTY—URBANA

E. R. Henderson's No. 1 J. A. Patterson, 300 ft. N and W, SE cor. SE NW Sec. 19-18-14	Dry and abd. 2,360 ft.

Mississippi

HINDS COUNTY

Hensley & Tanner's No. 1 Hudson, 1,300 ft. N, 1,500 ft. W, SE cor. Sec. 11-5-1e	Top of black shale 2,320 ft.; set 7-in. csg. at 2,399 ft.
Love & Lancaster's No. 2 Elton plantation, NE Sec. 9-4-1e	Began drlg. Sept. 20; cmt. surface csg. at 5 ft.
Meredith Trading Co.'s No. 1 Nelson et al, 630 ft. E, 330 ft. S, NW cor. SW SE Sec. 24-6-1e	Rigging up.
United Gas Public Service Co.'s No. 1-C McLaurin, Sec. 19-6-2e, C SE	Corrected depth 2,632 ft.; S.D.

RANKIN COUNTY

Ferguson, Fuller & Metz' No. 1 Ammons, 350 ft. E and S, NW cor. NW NW Sec. 25-3n-3e	Rigged up.
Love Pet. Co.'s No. 2 fee, Sec. 31-6-2e, 325 ft. N, 25 ft. E of SW cor.	S.D. 719 ft.
Cleve Love et al's No. 1 Thomas, SW Sec. 10-4-1e.....	Derrick.
Muse & Muse's No. 1 Carlton, Sec. 13-5n-1e, 650 ft. E, 725 ft. N, SW cor.	Cmtd. 6-in. 2,407 ft.

EAST TEXAS (Border Counties)

MARION COUNTY

Perry et al's No. 1 E. B. Colgin, 300 ft. N and E, SW cor. Martin Noll Sur.	Set 10-in. 50 ft; S.D. 1,400 ft.

PANOLA COUNTY

W. H. Nichols et al's No. 1 S. W. Ray, 330 ft. S of N line, 330 ft. W of E line, W. P. Culver Sur.	Drlg. 420 ft.
M. H. Robbins et al's No. 1 Aizee Williams, 165 ft. N and E, SW cor. 10-ac. tract in Winnie Mann Sur. ..	Rigging up.
C. R. Obermeyer et al's No. 1 T. J. Wooten, P. Martin Sur.	Drlg. 360 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 48)

Earl A. Post's No. 3 J. F. and F. X. Bilhartz, 150 ft. from N and E lines of S 200 acres of 385-ac. tract in F. Boles Sur. ..... Moving in rig.

Roe & Day's No. 2 City Nat'l. Bank, 150 ft. from N and W lines of tract in I. Perez Sur. No. 15 ..... T.D. 350 ft.; abd.

C. A. Smith's No. 1 Henry Lamb, 750 ft. from N and E lines of Lamb farm, in de la Garza grant ..... T.D. 620 ft.; drlg.

F. E. Tegler's No. 1 Brackenridge, 578 ft. from S line, 3,284 ft. from W line of tract in Maria Gertrudis de Alaniz Sur. ..... T.D. 1,320 ft. in chalk showing oil; reaming.

C. L. Witherspoon's No. 1 S. Wetz, 150 ft. from N line, 540 ft. from W line of 284-ac. tract in Jett-Simpson Sur., near Von Ormy ..... T.D. 608 ft.; comp. 18,000 ft. gas.

BLANCO COUNTY

Blanco Development Co.'s (McGee) No. 1 A. J. Dittmar, 1,320 ft. from S line, 150 ft. from W line of George Evans Sur. No. 58, 4 miles NW of Johnson City ..... T.D. 720 ft.; standing.

Isham et al's No. 1 Lester ranch, 200 varas from N and E lines of Antonio Bandrand Sur., 8 miles NE from Johnson City ..... T.D. 405 ft.; S.D.

CALDWELL COUNTY

Judge R. L. Batts' No. 2 Roebuck, 2,400 ft. from NE line, 1,200 ft. from SE line of tract in Arthur Swift Sur. ..... T.D. 2,268 ft.; S.D.

E. L. Hope and Joe Cole's No. 1 Mike August, 150 ft. from NE line, 165 ft. from NW line of tract ..... T.D. 1,961 ft.; S.D.

DE WITT COUNTY

C. B. Bunte, Inc.'s No. 1 Emil Buckhorn, SE cor. of 120-ac. tract in Andrew Lockhart Sur., 2 miles SW from Lindeneau ..... T.D. 2,520 ft.; drlg.

L. G. Wade's No. 1 fee, 6 mi. S from Yoakum, 520 ft. from NW line, 160 ft. from SW line of 35-ac. tract in Lavina Dunbar Sur. ..... T.D. 2,257 ft.; S.D.

DUVAL COUNTY

Al Buchanan et al's No. 1 Duval County Ranch Co., 1,650 ft. from E line, 990 ft. from S line of S½ of N½ of Sur. No. 206 ..... T.D. 1,483 ft.; sand 1,475-83 ft.; tested 700 ft. of oil in 15 min.; set csg.

S. B. Cloyes' No. 1 Hagist, 3,630 ft. from E line, 2,310 ft. from S line of B.S.&F. Sur. No. 265 ..... T.D. 500 ft.; drlg.

Eaton et al's No. 1 Herbst, 1,650 ft. from E line, 330 ft. from S line in S.A.&M.G. Sur. No 71 ..... Standing.

O. W. Killam's No. 2 Wood-Welder, 3,658 ft. from S line, 900 ft. from W line of Sur. No. 102 ..... T.D. 357 ft.; drlg.

S. S. & H. Oil Co.'s No. 1 Hunter, 330 ft. W of CEL of J. Poitevant Sur. No. 515 ..... T.D. 2,674 ft.; coring.

W. A. Smith's No. 1 Holzapfel, west central part of lease in 900 ft. W of NE cor. of Sur. 344 and 150 ft. from N line of Sur. No. 42 ..... T.D. 398 ft.; standing waiting on water.

Whitting's No. 1 Duval County Ranch Co., 1,511 ft. from S line, 2,143 ft. from W line of Blk. 21, of Sur. No. 196 ..... T.D. 1,225 ft.; drlg.

EDWARDS COUNTY

Love and Evans' No. 1 Steve Brown, 660 ft. from N and E lines of Sec. 66, G.W.T.&P.R.R. Sur., 15 miles W of Rock Springs ..... T.D. 2,450 ft. in sand showing oil.

FRIO COUNTY

Amerada Pet. Corp.'s No. 1 Frank Doering, 34 ft. from W line, 1,700 ft. from S line of Tract No. 7 in Maria Louisa Carranza Sur. No. 302 ..... T.D. 5,585 ft.; drlg. hard chalk.

J. E. Greenlee's No. 2 Burns, 150 ft. from W line, 1,800 ft. from S line of SE of 160-ac. tract, Castro Sur. No. 123 ..... T.D. 2,365 ft.; abd.

GILLESPIE COUNTY

Powers et al's (Nixon-Dore) No. 1 Andrew Lindig, 18 mi. E of Fredericksburg ..... T.D. 1,194 ft.; fishing.

GONZALES COUNTY

Volz & Shelling's No. 1 Bennett Botts et al, 150 ft. from W line, 800 ft. from N line of 420-ac. tract, lease in Gonzales Sur. ..... T.D. 500 ft.; drlg.

GUADALUPE COUNTY

A. F. Barnhill's No. 3 F. A. Phullman, 1,300 ft. from N line, 152 ft. from E line of lease in L. Bollinger Sur. ..... Moving in rig.

Clint Lanier's No. 1 L. D. Hill, 450 ft. from NW line, 1,450 ft. from NE line of George Allen Sur. ..... T.D. 610 ft.; S.D.

L. E. Trout's No. 1 Mrs. M. McKee, 650 ft. from W and 150 ft. from N line of 239-ac. tract in Green Dewitt Sur., 4 miles SW from Darst Creek ..... Moving in rig.

W. J. Walton and H. H. Weinert's No. 1 Sorrell, 1,350 ft. from S line, 300 ft. from E line of Sorrell tract in Manuel Ximines Sur. ..... T.D. 1,000 ft.; drlg.

HIDALGO COUNTY

Carl & Johnston's No. 1 Doughty, 187 ft. from S and E lines of Lot 11, Blk. 5 of Subd. of Indios Ranch Sur. in N. Hidalgo ..... T.D. 3,040 ft.; S.D.

Chancellor & Hall's No. 1 Garcia Land & Cattle Co., 150 ft. from W line of Porcion 42 and 150 ft. N of old Military Highway ..... T.D. 3,187 ft.; standing

Maxwell & Young's No. 1 King, 175 ft. from N and E lines of Lot 3, Blk. 16, Alamo tract ..... T.D. 875 ft.; drlg.

JACKSON COUNTY

Ed Parson et al's No. 1 Clark, 300 ft. from S and W lines of R. J. and M. Clark lease in A. S. White Sur. ..... Derrick.

JIM HOGG COUNTY

D. C. DeWitt's No. 1 A. G. Lopez, 3,475 ft. from W line, 425 ft. from N line of Sur. No. 106 ..... TD. 2,510 ft.; drlg.

Brooklyn Oil Co.'s No. 1 De La Garza, 660 ft. from N and W lines of Blk. 87 of Pippins Subd. of Randado Grant Sur. ..... T.D. 1,100 ft.; drlg.

KENDALL COUNTY

E. W. Martin's No. 1 Houston, in F. Wright Sur. ..... T.D. 1,987 ft.; standing.

KERR COUNTY

J. E. Anderson's No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,923, in Hamilton Sur., 4 miles S of Center Point .. .. T.D. 1,885 ft.; standing in shale and sand.

Evans & Gant's No. 1 Love, 660 ft. S of S line of Sur. 1,597, 1,320 ft. from W line of Sur. 1,594 ..... T.D. 4,060 ft.; rigging up to deepen.

Van Duyn & Moore's No. 1 Nowlin, 2,000 ft. from E line, 2,200 ft. from N line of Jas. R. Bettner Sur. No. 99 ..... T.D. 1,015 ft.; S.D.

LA SALLE COUNTY

Pacific Gulf Oils and C. B. Bunte's No. 1 Lastinger, C of NE of Sec. 507 ..... T.D. 2,256 ft.; abd.

W. H. Wallace's No. 1 H. C. Yeager, 150 ft. from S and E lines of Sur. No. 95 ..... T.D. 1,650 ft.; drlg.

LIVE OAK COUNTY

J. H. Durbin's No. 2 Marbach, 1,000 ft. from S line, 3,200 ft. from W line of S. Hays Sur. ..... T.D. 904 ft.; moving rig back, will try to make well.

Holland Oil Co.'s No. 1 T. J. Lynn, 175 varas from E line, 54 varas from N line of 272-ac. tract in Sur. No. 171 ..... T.D. 3,300 ft.; drlg.

M. P. Howard's No. 1 Alexander, 2,700 ft. from N line, 150 ft. from E line of 500-ac. tract, 3 miles NE of Callihan ..... T.D. 1,223 ft.; recmtd. csg. third time.

McMULLEN COUNTY

Nixon & Foster's (C. B. Bunte) No. 1 Lowe, 1,320 ft. from NE line, 1,320 ft. from NW line, Sec. 132, A. Starr Sur. ..... Laying water line and bldg. pits.

L. W. Stieren's No. 1 Hortono, 1,000 ft. from N, 2,000 ft. from E line of Sur. on 3,089-ac. tract in J. M. Jean Sur. ..... T.D. 620 ft.; drlg.

Paul C. Teas' No. 3 Hagist, 330 ft. from N and W lines of Sec. 19 ..... To start drlg. about Oct. 18.

Paul C. Teas' No. 1 Hagist, 330 ft. from N and E lines of Sec. 181, 10 miles N from Government Wells.... T.D. 1,115 ft.; coring for Cole sand.

Paul C. Teas' No. 2 Hagist, 330 ft. from N and W lines of Sec. 25, Blk. 5, of H.&T.C.R.R. Sur. ..... T.D. 475 ft.; drlg.

MILAM COUNTY

Ed Clark et al's No. 1 Thomas Graves, 250 ft. from SW and NW lines of Jackson Hall Sur. ..... T.D. 890 ft.; shut down in shale

NUECES COUNTY

Banquette Oil Co.'s No. 1 T. C. Ingram, 330 ft. from N and W lines of 80-ac. tract, Blk. 6, Sec. 7, of S. R. Peters Sur. ..... T.D. 1,400 ft.; drlg.

S. F. Hurlbut and Southwest Oil Co.'s No. 1 Poenisch, center Blk. 2, Sec. 32, Flowerbluff & Encinal farm, 8 miles S from Corpus Christi ..... T.D. 525 ft.; W.O.C.

Texon Royalty Co.'s No. 1 E. McCoy, 330 ft. from W line, 3,830 ft. from S line, Sec. 3, of Palo Alto Sur., 6 miles SE from Agua Dulce ..... T.D. 2,100 ft.; drlg.

SAN PATRICIO COUNTY

George W. Scruggs' No. 1 Collins, 1,040 ft. from NE line, 700 ft. from SE line of Blk. 36, E. J. McGloin Sur. ..... T.D. 2,758 ft; changing to heavier rig

STARR COUNTY

B.&B. Oil Co.'s No. 1 Crown Brick & Tile Co., 1,800 ft. S of State Highway No. 4 and 580 ft. from W line of Porcion 87, near La Puerta ..... T.D. 4,560 ft.; litigation settled; to resume work soon.

Great Plains Oil Co.'s No. 1 Sanchez, 660 ft. from W line, 330 ft. from S line of SE NW of Sur. No. 344 .. T.D. 2,350 ft.; standing.

Goodwin & Yantis' No. 1 Kelsey Bass, 150 ft. from S and E lines of Blk. 8, Coast O. & G. Subd. of Secs. 2 and 3, Porcions 86-87 ..... T.D. 1,040 ft.; standing.

Goodwin & Yantis' No. 1 Seabury, 150 ft. from S and W lines of Sec. 107, Share No. 1, Porcion No. 107... T.D. 2,095 ft.; no report.

Goodwin and Yantis' No. 2 Walker, 3,000 ft. from S line, 2,000 ft. from W line of Sur. No. 767 ..... T.D. 622 ft.; drlg.

K. D. Harrison's No. 1 Garcia, 4,018 ft. from S line, 330 ft. from W line of Share 215, Porcion 90, jurisdiction Camargo ..... T.D. 2,552 ft.; abd.

Myers, Sullivan & Jenkins' No. 1 Starr County Cattle Co., 330 ft. from N line, 330 ft. from W line, Blk. 62, Porcion 89, Share 60 ..... T.D. 510 ft.; drlg.

R. D. Perkins & Hoffman's No. 1 E. A. Peffler, 3,090 ft. from W line, 2,480 ft. from S line of Sur. 933. T.D. 80 ft.; standing.

TRAVIS COUNTY

Franklin et al's No. 1-A Reimers, 1,200 ft. from SE line, 1,600 ft. from most southerly SW line of Sur. No. 35 ..... T.D. 500 ft.; standing.

Watson, Johnson & Brady's No. 2 Brady ..... T.D. 1,345 ft.; standing.

Weaver & Osborn's No. 1 Will Reinhardt, 300 ft. from NW line, 1,200 ft. from NE line of Will Reinhardt 100-ac. tract in William Lewis, Jr., Sur. 2.... T.D. 248 ft.; standing.

UVALDE COUNTY

Evans & Thompson's No. 1 Farris, 400 ft. from S and W lines of 535-ac. tract near center of John J. Hammond Sur. ..... T.D. 460 ft.; no report.

John Roberts' No. 3 Kincaid ..... T.D. 385 ft.; standing.

O. A. Payte, No. 1 H. M. Waldrip, 160 ft. from S and W lines of G. Traute Sur. No. 471 ..... T.D. 1,040 ft.; S.D. in lime.

WEBB COUNTY

Merle Gunby's No. 1 A. M. Bruni, 1,252 ft. from W line, 328 ft. from S line of Sur. No. 857 ..... T.D. 2,310 ft.; drlg.

Will Ohlhausen's No. 1 Moses Jones, 273 varas from E line, 516 varas from S line of 100-ac. tract in Sur. No. 1,640 ..... T.D. 850 ft.; standing.

WILLIAMSON COUNTY

Alexander Drlg. Co.'s No. 1 J. & G. Kreig ..... T.D. 1,550 ft.; fishing.

Fritz Fuchs' No. 1 Zeischang ..... T.D. 1,075 ft.; comp. on pump; 10 bbls. daily.

Humble O. & R. Co.'s No. 1 Burns est., 825 varas from NW line, 1,495 varas from SW line of J. West Sur.. Moving in machinery.

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tract, B. Manlove Sur. ..... T.D. 2,265 ft.; standing.

Pederson's No. 4 Forwood, 900 ft. from N and 1,200 ft. from E line of 160-ac. tract in Fisher Sur. ..... T.D. 652 ft.; standing.

Taylor Production Co.'s No. 1 Backmeyer, 283 ft. from N line, 396 ft. from E line of 38-ac. tract in White Sur. ..... T.D. 922 ft.; comp. on pump; 10 bbls. daily.

Wilson, Worley & Moore's No. 1 Mrs. M. E. Olive ..... T.D. 41 ft.; S.D.

ZAPATA COUNTY

J. C. Charver's No. 1 Bustamente, 330 ft. from N and E lines of 24-ac. tract in Share 24 of Las Comitas grant ..... T.D. 1,250 ft.; drlg.

Hamilton, Brower & Crow's No. 1 Slator, 2,111 ft. from SW line, 1,980 ft. from SE line of Blk. 1, Subd. of Slator ranch in J. V. Borrego grant ..... T.D 1,069 ft; standing.

Circle W. Oil Co.'s No. 1 M. Garza est., 623 ft. from NW line and 699 ft. from SW line of Blk. 30, C. A. Douglas Subd. of Charco de la India grant ..... T.D. 1,305 ft.; drlg.

J. P. Doyle's No. 1 I. Ramirez, 150 ft. from NW and SW lines of Blk. 15, Share 1, Porcion 18 ..... Spudded in and S.D.

Sarah Poppas' No. 1 Juan V. Cueller, Jr., 150 ft. from NE and SE lines of Blk. 3, Sur. 2 of Poppas Subd. of Por. 34 ..... T.D. 770 ft.; standing.

A. C. Savey et al's No. 1 Flores, 150 ft. from NW line, 206 ft. from NE line of Blk. 3, Share 1 of P. A. Richer Subd. of Porcion No. 38 ..... T.D. 2,404 ft.; standing.

ZAVALA COUNTY

Zavala O. & G. Co.'s No. 1 Gates, 1,320 ft. from N line, 1,320 ft. from E line of Hooper & Wade Sur. No. 13.. T.D. 6,054 ft; hole cleared; standing.

Southwest Texas Proven Areas

Week Ending October 14

CEDAR CREEK POOL—BASTROP COUNTY

Marts & Beavens' No. 1 C. A. Smith, 700 varas from SE line, 1,150 varas from NE line of C. A. Smith 415-ac. tract in James Blalock Sur. No. 7 ..... Rigging up.

Marts & Beavens' No. 5 Reyes, 530 varas from NW line, 1,420 varas from SW line of 233-ac. tract in Addison Lytton Sur. ..... T.D. 1,684 ft.; comp. 25 bbls. daily on pump; no wtr.

Marts & Beavens' No. 2 Orgain, 450 ft. from NW line, 150 ft. from NE line of Mrs. B. D. Orgain's 207.75-ac. tract in Addison Litton Sur. No. 1 ..... Rigging up.

Joe Mills' No. 2 Voss, 160 ft. from NW and SW lines of Sallie A. Voss' 78.24-ac. tract in Addison Litton Sur. ..... T.D. 150 ft.; drlg.

Joe Mills' No. 1 Voss, 400 ft. to E line, 150 ft. S of 78-ac. tract in Addison Litton Sur. ..... T.D. 1,874 ft.; bailing sand 1,768-86 ft.; tested dry.

NORTH DALE POOL—BASTROP COUNTY

Chiquita Oil Co.'s No. 3 Harris, 600 ft. SW of No. 1 or 60 ft. from Bee Creek and 140 ft. from W line of 40-ac. tract in John Maxmillan Sur. ..... T.D. 2,300 ft.; comp. pumping 85 bbls. oil and some wtr.

Marts & Beavens' No. 4 C. L. Riddle, 2,200 ft. from SW line, 200 ft. from NW line of John Maxmillian Sur. No. 22 ..... Derrick.

Marts & Beavens' No. 3 Riddle, 685 ft. from NW line, 2,075 ft. from SW line of John Maxmilian Sur. ....Bldg. derrick.
Ogden & Reed's No. 1 Spradlin, 300 ft. from S line, 200 ft. from E line of 113-ac. tract in Grey Sur .Rigged up; standing.
Ogden & Reed's No. 3 Riddle, from S cor. of Joshua Gray Sur. NE along SE line 760 ft. thence NW 150 ft. at right angles in Joshua Gray Sur. .....T.D. 300 ft.; drlg.

TULETA POOL—BEE COUNTY

Conservative Oil Co.'s No. 1 Coutts, 165 ft. from W line, 150 ft. from N line of SW SW SW Sec. 2, Blk. 7, Ragsley Subd., Miller Chittam ranch, J. M. Uranga grant .....T.D. 4,478 ft.; comp. as gas well; 350 lbs. on csg.; 250 lbs. on tubing.

ECKERT POOL—HEXAR COUNTY

Eckert & Son's No. 12 Brehm, 150 ft. from S line, 200 ft. from W line of 93-ac. tract in Buquor Sur. 28 ..T.D. 710 ft.; comp. 8 bbls. daily.
Eckert & Son's No. 9 Brehm, 150 ft. from S line and 190 ft. from W line of 93-ac. tract in Buquor Sur. ..T.D. 703 ft.; comp. 12 bbls. daily.
J. F. Harrison's No. 1 F. Gembler, 150 ft. from NW line, 460 ft. from NE line of 88-ac. tract in J. Montez Sur. .....T.D. 550 ft.; drlg.
Swearingen Oil Co.'s No. 14 Halbardier, 700 ft. N of No. 3 on 93-ac. tract .....T.D. 650 ft; drlg.
Swearingen Oil Co.'s No. 15 Halbardier, 2,350 ft. from W line, 850 ft. from N line of Jose Maria y Perez Sur. .....T.D. 715 ft.; comp. 7 bbls.

WEBSTER POOL—CALDWELL COUNTY

C. J. Webster Oil & Gas Co.'s No. 1 Fulps, 150 ft. from E line, 325 ft. from S line of tract in John A. Neill Sur. .....T.D. 2,395 ft.; topped Edwards stained with oil; D.S. test at 2,297 ft. failed to show.

EAST COLE FIELD—DUVAL COUNTY

Cole Petroleum Co.'s No. 1 S. Benavides, 150 ft. from SW line, 347 ft. from SE line, Blk. 347, Myrtle E. Hill Subd., Mariana Arisne grant .....T.D. 2,824 ft.; abd.

ECKERT POOL—DUVAL COUNTY

F. H. Eckert & Son's No. 8 Louis Brehm, 550 ft. from W line, 150 ft. from S line of 93-ac. tract in P. L. Buguor Sur. ..... Spudding in; the test previously reported as a completion should have been No. 12 instead of No. 8.

NORTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Central Producers, Inc.'s No. 2 Wendt, 330 ft. from N line, 150 ft. from E line of NE NE Sur. No. 43....T.D. 763 ft.; drlg.
Rodney DeLange's No. 1 Lundell, 330 ft. from S line, 150 ft. from E line of SW of Sur. No. 60 .....T.D. 1,135 ft.; drlg.
Hamill & Hamill's No. 7 Hahl, 330 ft. from S line, 990 ft. from E line of N½ of SE of Sur. No. 42 ..T.D. 2,294 ft.; set csg.; W.O.C.
Highland Oil Co.'s No. 8 Lundvall, 330 ft. from S and E lines of J. Poitevant Sur. No. 42 .....T.D. 1,750 ft.; drlg.
Humble O. & R. Co.'s No. 16 Hahl, 990 ft. from S line, 990 ft. from W line of E½ of Sur. No. 360 .....T.D. 2,299 ft.; set csg.; W.O.C.
Humble Oil & Ref. Co.'s No. 17 Hahl, 1,650 ft. from S line, 990 ft. from W line of E½ of Sur. No. 360 ..T.D. 1,200 ft.; drlg.
Humble Oil & Refining Co.'s No. 13 Hahl, 3,670 ft. from S line, 330 ft. from W line of E half of Sur. No. 360..T.D. 2,304 ft.; flowing; not gauged.
Humble Oil & Refining Co.'s No. 15 Hahl, 330 ft. from N and W lines of E half of Sur. No. 360 .....T.D. 2,275 ft.; drlg.
Kot Oil Co.'s No. 1 Lundell, 150 ft. from S and E lines of S½ of NW, Sur. No. 48 ..... Rigging up.
Magnolia Pet. Co.'s No. 2 Duval County Ranch Co., 330 ft. from S line, 936 ft. from E line of Sur. No. 208 .....T.D. 1,838 ft.; drlg.
Magnolia Pet. Co.'s No. 7 Allen, 330 ft. from N line, 990 ft. from E line of S½ of SE Sur. No. 42 ..... Rigging up.
Navarro Oil Co.'s No. 11 Hahl, 330 ft. from N and W lines of W½ of Sur. No. 360 .....T.D. 2,302 ft.; setting csg.
Navarro Oil Co.'s No. 25 Hahl, 330 ft. from N line, 990 ft. from E line of W½ of Sur. No. 360 .....T.D. 2,280 ft.; drlg. in.
Navarro Oil Co.'s No. 10 Hahl, 990 ft. from N line, 330 ft. from W line of W½ of Sur. No. 360 .....T.D. 2,295 ft.; comp. 40 bbls. hrly.
Navarro Oil Co.'s No. 28 Hahl, 2,310 ft. from S line, 990 ft. from W line, W half of Sur. No. 360 .....T.D. 2,270 ft.; drlg. in.
Navarro Oil Co.'s No. 29 Hahl, 2,970 ft. from S line, 990 ft. from W line, W half of Sur. No. 360 .....T.D. 2,278 ft.; being comp.
Navarro's No. 9 Hahl, 1,650 ft. from N line, 330 ft. from W line of W½ of Sur. No. 360 .....T.D. 2,259 ft.; 35 bbls. hourly.
Reynosa Oil Corp.'s No. 4-B Duval Ranch Co., 330 ft. from S and E lines of E½ of SE. Sur. No. 363 ..... Rigging up.
Reynosa Oil Corp.'s No. 5-A Duval Co. Ranch Co., 330 ft. from S and E lines of N half of SW of Sur. No. 362 .....T.D. 2,005 ft.; drlg.
Russ Pet. Co.'s No. 2 Riley, 330 ft. from N and E lines of SW NW of 40-ac. tract in Sec. 46 ..... Derrick.
Russ Petroleum Co.'s No. 2-A Hahl, 330 ft. from N and E lines of NW SW, Sur. No. 46 .....T.D. 2,296 ft.; comp. 100 bbls. dly.
Smith & Storey's No. 5 Lundell, 150 ft. from N and E lines of S half SW of Sur. No. 48 .....T.D. 2,465 ft.; abd.
Sun Oil Co.'s No. 6 Weiderkehr, 660 ft. N of No. 4, Sur. No. 359 .....T.D. 2,277 ft.; coring in.
Sun Oil Co.'s No. 7 Weiderkehr, 330 ft. from N and W lines of Sur. No. 359 ..... Rigging up.

SOUTH GOVERNMENT WELLS POOL—DUVAL COUNTY

Humble Oil & Refining Co.'s No. 11 Paul White, 1,310 ft. from E line, 1,000 ft. from S line of Sur. No. 249..T.D. 600 ft.; drlg.
Humble Oil & Ref. Co.'s No. 11 White, 1,310 ft. from E line, 1,000 ft. from S line of Sur. No. 249 .....T.D. 2,240 ft.; set csg.; W.O.C.

SARNOSA POOL—DUVAL COUNTY

L. W. Capps' No. 6-A Duval County Ranch Co., 330 ft. from SW line, 1,380 ft. from NW line of W¼ of Sur. No. 574 .....Rigged up and standing.
Violet Oil Co.'s No. 1, 330 ft. from NW line, 525 ft. from SW line of N half of Sur. No. 127 .....T.D. 2,525 ft.; tested 7 joints of oil and wtr.; S.D.

PALANGANO POOL—DUVAL COUNTY

Southern Alkali Corp.'s No. 3 Mrs. Jane Schallert, 2,-600 ft. from S line, 2,250 ft. from E line of Sur. No. 81 .....T.D. 1,002 ft.; abd.

PETERS POOL—DUVAL COUNTY

Shasta Oil Co.'s No. 4 Peters, 990 ft. from E line, 330 ft. from S line of Strip, Sec. 65 .....T.D. 2,494 ft.; W.O.; P.B. to gas sand at 1,733 ft.; W.O.C.

PIEDRAS PINTAS POOL—DUVAL COUNTY

Kelley et al's No. 1 C. S. Tinney, 1,100 ft. from N line, 200 ft. from E line of Sur. No. 3 .....T.D. 500 ft.; abd.

CHITTIM POOL—MAVERICK COUNTY

Rycade Oil Corp. et al's No. 2 Chittim, 1,520 ft. from N line, 350 ft. from W line of Sec. 157, I.&G.N.R.R. Sur., Blk. 7 .....T.D. 200 ft.; dropped; duplicate of McCready's No. 1 Chittam.

JACOBS POOL—McMULLEN COUNTY

Loma Oil Co.'s No. 19-A Jacobs, 930 ft. SE of No. 17-A, in G.H.&H. Sur. No. 7 .....Spudded in.
Loma Oil Co.'s No. 18-A Jacobs, 660 ft. S of No. 11, in W. H. Jacobs Sur. No. 8 .....Derrick.
Loma Oil Co.'s No. 17-A Jacob, 304 ft. from W line, 1,410 ft. from S line of G.H.&H. Sur. No. 7 ..T.D. 1,000 ft.; comp. 15 bbls.
Longhorn Oil Co.'s No. 3-A Lark, 450 ft. from N line, 150 ft. from W line of Blk. 14, of Subd. of Lark land in E. W. B. Scrugham Sur. .....T.D. 1,008 ft.; set csg.
Kennon & Stephenson's No. 1 Lark, 150 ft. from N and W lines of Blk. 15, subd. of Lark land in E. W. B. Scrugham Sur. .....T.D. 1,033 ft.; set csg.; W.O.C.
J. S. Suttle's No. 1 Lark, 150 ft. from N and W lines of Blk. 16, in E. W. B. Scrugham Sur. .....T.D. 1,048 ft.; running tubing; est. 30 bbls. daily.

AGUA DULCE FIELD—NUECES COUNTY

H. F. Grimm's No. 1 Bluntzer, 300 ft. from W line, 2,100 ft. from S line of 639-ac. tract in Elliff Sur. ..Location.

CUEVITAS POOL—STARR COUNTY

Mims, Hamill & Evans' No. 1 M. Guerra, 330 ft. from E line, 330 ft. from S line of Share M-10, in Las Cuevitas grant .....Location.
Sun Oil Co.'s No. 1-D Guerra, 6,353 ft. from NE line, 3,300 ft. from SE line of La Sacatosa grant .....Rigging up.
Sun Oil Co.'s No. 5-A Guerra, 3,364 ft. from SW line, 6,595 ft. from SE of Share H-14-B of Las Cuevitas grant .....T.D. 2,050 ft.; drlg.

LOS OLMOS POOL—STARR COUNTY

Tarver and Nance's No. 8-A Kelsey Bass, 150 ft. from N line, 160 ft. from W line of SW SE Sec. 6, Porcions 75, 76, 77, Jurisdiction of Camargo .....T.D. 448 ft.; set csg.; W.O.C.

CAR-TEX POOL—WEBB COUNTY

Washington-Texas O. & G. Co.'s No. 2 R. O. Barnsley, 150 ft. from E line, 450 ft. from N line of Blk. 16, Sur. 268 .....T.D. 1,935 ft.; drlg.; No. 1 corrected to No. 2.

LAUREL FIELD—WEBB COUNTY

Montex Oil Co.'s No. 1 C. O. Haines, 150 ft. from S and E lines of Sur. 234 .....T.D. 2,515 ft.; abd.

MOCA POOL—WEBB COUNTY

Moca Oil Co.'s No. 7 Duval County Ranch Co., 285 ft. from W line, 1,825 ft. from N line of Blk. 22, Share 3 of Zapata County School Land Sur. .....T.D. 945 ft.; abd.

ESCOBAS POOL—ZAPATA COUNTY

Allied O. & G. Co.'s No. 12 Bustamente, 3,665 ft. from SE line, 750 ft. from NE line of Share 4, Fansler partition in Comitas grant .....T.D. 1,276 ft.; set csg.; W.O.C.
S. R. & C. Oil Corp.'s No. 2-C Trevino, 330 ft. from S line, 330 ft. from W line of N¼ of Blk. 13, in Sur. No. 412 .....Location.
Texas Co.'s No. 43 Whitehead, 1,722 ft. from SE line, 19,507 ft. from SW line of Cerrito Blanco grant ..T.D. 1,008 ft.; drlg.

JENNINGS POOL—ZAPATA COUNTY

United Prod. Corp.'s No. 11 Measles, 3,483 ft. from NW line, 16,500 ft. from SW line of Cerrito Blanco grant .....T.D. 3,806 ft.; testing sand 3,801-06 ft.

Gulf Coast Fields and Wildcats

(Continued from Page 49)

Humble O. & R. Co.'s No. 21 Lockwood & Sharp, John Rabb Sur. .....Rigging
Humble O. & R. Co.'s No. 24-A Lockwood & Sharp .....Drlg. sand 5,300 ft.
Humble and Gulf's No. 10 Meyers, J. Rabb Sur., 987 ft. E of No. 8 .....Comp. 59 bbls. per hour; ⅝-in. choke, 5,300 ft.
Texas Co.'s No. 5 Waters, 300 ft. S. 300 ft. W from NE cor. of lease .....Drlg. shale 3,591 ft.
West-Len Oil Co.'s No. 1 Mulahill, 300 ft. N of S line, 300 ft. W of E line .....Drlg. gumbo 2,050 ft.

SUGARLAND—FORT BEND COUNTY

Dewalt Oil Co.'s No. 1 Peterson .....Derrick.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 2 Broussard-Orme, Martin Dunman Sur., 300 ft. S of No. 1-B Cade .....Rigging.
Yount Lee Oil Co.'s No. 38 Cade, 600 ft. NW of No. 1-B Cade, 755 ft. from No. 1 Smith, N. Fitzsimmons Sur. .....Rig.
Yount Lee Oil Co.'s No. 37 Cade, N. Fitzsimmons Sur., 600 ft. S of No. 36 .....Drlg. sand 3,979 ft.
Yount Lee Oil Co.'s No. 1-B Cade, N. Fitzsimmons Sur., 488 ft. from S line, 320 ft. from E line .....Cmtd. 5,910 ft.
Yount Lee Oil Co.'s No. 1-B Smith .....Drlg. gumbo 3,378 ft.
Yount Lee Oil Co.'s No. 19 Smith, Martin Dunman Sur., 150 ft. N at right angles from center of line between 14 and 15 .....Cmtd. csg. 1,240 ft.

ARIOLA—HARDIN COUNTY

Republic-Houston Oil Co.'s No. 4 Ariola, 800 ft. NE of No. 1, Ariola Sur. .....T.D. 4,794 ft. in salt; P.B. to sand 4,131-4,228 ft.; comp. 1,-750 bbls.; ½-in. choke.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 103 Jordit, Jordit Sur. .....Drlg. shale 992 ft.

SOUR LAKE—HARDIN COUNTY

Arlis Pet. Co.'s No. 1 Sour Lake Bank, H.&T.C. Sur., NW cor. Blk. 11, Sec. 69 .....Drlg. shale 2,050 ft.
Sesmo Oil Co.'s No. 1 W. R. Sasewell, 940 ft. S of NW cor., and 600 ft. from E line, B.B.B.&C. Sur. .....Derrick.

GOOSE CREEK—HARRIS COUNTY

Gulf Prod. Co.'s No. 17-A Tabb, Wm. Scott Sur., 1,288 ft. N line, 50 ft. E line (W.O.) .....Cutting and pulling screen 3,-008 ft.

HUMBLE—HARRIS COUNTY

Texas Co.'s No. 24 Koehler (O.W.D.D.) .....Drlg. sand showing oil 3,310 ft.
Wilson Pet. Co.'s No. 1 Cicero (W.O.) .....Sand 4,580 ft.; standing.

PIERCE JUNCTION—HARRIS COUNTY

Rio Bravo Oil Co.'s No. 19-A Settegast (D.D.), J. Kopman Sur. No. 44 2,585 ft. S, 385 ft. W of NE cor. of "A" lease .....Comp. 1,450 bbls.; ⅝-in. choke, 4,531 ft.
White & Ward's No. 1 Bullock .....Drlg. shale 4,005 ft.

TOMBALL—HARRIS COUNTY

Humble O. & R. Co.'s No. 2 Bloecher, C. Goodrich Sur., center of 17-ac. tract .....Drlg. shale 5,616 ft.
Humble Oil & R. Co.'s No. 1 Fredericks, center 18-ac. tract, J. M. Hooper Sur. .....T.D. 5,572 ft.; washing; S.O.
Humble O. & R. Co.'s No. 1-B Kobs, 1,399 ft. W of E line, 466 ft. N of S line, J. H. Edwards Sur. .....Drlg. sand 2,168 ft.
Humble O. & R. Co.'s No. 1 Petrick, J. M. Hooper Sur., 600 ft. N line, 466 ft. E line of lease .....Rig.
Humble O. & R. Co.'s No. 1 Quilter, A. Senchel Sur., 1,320 ft. out of NE cor. 320-ac. tract .....Derrick.
Humble O. & R. Co.'s No. 1 Theis, 600 ft. N of S line, 500 ft. E of W line, 100-ac. tract, C. Goodrich Sur. Drlg. sand 5,580 ft.
Magnolia Pet. Co.'s No. 1 Ervine, J. House Sur., 1,178 ft. E line, 1,399 ft. S line of lease .....Drlg. shale 1,765 ft.
Magnolia Pet. Co.'s No. 1 Rudel-Oster, J. House Sur., 3,664 ft. S line, 162 ft. W line .....Drlg. sand 2,170 ft.
Texas Co.'s No. 1 H. Martens, C. Goodrich Sur., 666 ft. W, 300 ft. N of SE cor. of lease .....T.D. 5,576 ft.; setting screen and liner.

FANNETT—JEFFERSON COUNTY

Black Gold Oil Co.'s No. 1 Jackson, Wm. Smith Sur., 3,766 ft. S line, 117 ft. from W line (356) .....Derrick.
Gulf Prod. Co.'s No. 7 Burrell, W. H. Smith Sur., 150 ft. W of No. 6 .....Drlg. sand showing oil 4,269 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 7 Davis (W.O.), Duncan Sur..Drlg. shale 7,106 ft.
Cranfill-Reynolds Co.'s No. 11 Moores Bluff, Duncan Sur., 2,100 ft. from N line, 1,069 ft. from E line of 632-ac. tract .....Drlg. shale 4,556 ft.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 3 Crowe & Jacobs, 1,700 ft. E, 1,050 ft. N of SW cor. of H.&T.C. Sur. No. 21 .....T.D. 6,560 ft.; fishing.

HULL—LIBERTY COUNTY

Eclipse Oil Co.'s No. 1 Ward, (W.O.) Jesse Devore Sur., 50 ft. S, 50 ft. W of NE cor. Empire G. & F. Co.'s 13 acres .....Drlg. shale 5,446 ft.
W. B. Flynn's No. 2 Flynn, J. Devore Sur., 25 ft. S No. 1.T.D. 1,546 ft.; fishing.
Houston Prod. Co.'s No. 2 Orgain, 300 ft. E of No. 1 ..Derrick.
Humble O. & R. Co.'s No. 1 Hannah, 204 ft. N, 312 ft. W, SE cor. of lease .....T.D. 4,450 ft.; comp. 80 bbls. per hr.; ½-in. choke.
Humble O. & R. Co.'s No. 27 Hooks-Guedry, Jesse Devore Sur. .....Derrick.
Miramar Oil Corp.'s No. 3 Phoenix Dev. Co., Jesse Devore Sur., 400 ft. due E of No. 1 Phoenix Dev. ....Drlg. shale 4,520 ft.
Republic Prod. Co.'s No. 149 Dolbear (W.O.), Jesse Devore Sur., 250 ft. W of No. 6 .....Drlg. sand 2,912 ft.

The Texas Co.'s No. 8 Hannah (W.O.), Jesse DeVore Sur. ..... T.D. 5,376 ft.; reaming 4,387 ft.

LIBERTY FIELD—LIBERTY COUNTY

H. Mecon's No. 1 Piggott, 450 ft. W line, 110 ft. N of S line of 5-ac. tract, N. G. White Sur. ..... Drlg. shale 3,275 ft.
Ross Oil Co.'s No. 1 Richardson, M. G. White Sur., 120 ft. E of Gulf-Humble's No. 1 Carter ..... Derrick.

CONROE—MONTGOMERY COUNTY

Brown & Wheeler's No. 1 Gilbert, J. A. Davis Sur., 1,050 ft. S, 4,327 ft. W of lease ..... Drlg. shale 1,300 ft.
Feltex Oil Co.'s No. 4 Kirby-Bertrand ..... Comp. 115 bbls. per day; ½-in. choke; T.D. 5,140 ft.

Feltex Oil Co.'s No. 3 Kirby-Bertrand, Wagers Sur., 1,267 ft. S of No. 1, center E and W of tract ..... Drlg. sand 675 ft.
Gulf Coast Drlg. & Prod. Co.'s No. 2 J. L. Hensley, A. Steele Sur., 466 ft. S line in center E and W of strip ..... Derrick.
Gulf Coast Drlg. & Prod. Co.'s No. 11 Keystone Mills.. Drlg. shale 5,020 ft.
Gulf Coast Drlg. & Prod. Co.'s No. 12 Keystone Mills, A. James Sur., 467 ft. W line, 933 ft. S of No. 11.. Standing 5,148 ft.
Gulf Coast Drlg. & Prod. Co.'s No. 12-B Keystone Mills ..... Drlg. shale 1,403 ft.
Gulf Oil & Sulphur Co.'s No. 2 Springfield, J. S. Springfield Sur., 466 ft. from SW line, 100-ac. lease ..... Derrick.
Harrison & Abercrombie's No. 6 Massey, 466 ft. S and E lines of lease, T.&N.O. Sur. ..... Comp. 76 bbls. per hr.; ⅛-in. choke; T.D. 5,093 ft.
Humble O. & R. Co.'s No. 11 Dobbins ..... Comp. 59 bbls. per hour; ½-in. choke; T.D. 5,117 ft.

Humble O. & R. Co.'s No. 4 D. P. Griffin, 330 ft. W of E line, 108 ft. N of S line of tract, Wilson Strickland Sur. ..... Drlg. shale 1,440 ft.
Humble O. & R. Co.'s No. 12 Madeley, Ransom House Sur., 800 ft. N line, 1,310 ft. W line of tract ..... Sand 5,156 ft.
Humble O. & R. Co.'s No. 19 Madeley, Ransom House Sur. ..... Drlg. shale 1,326 ft.
Humble O. & R. Co.'s No. 25 Madeley, Ransom House Sur., 933 ft. S of No. 15 ..... Drlg. shale 5,010 ft.
Humble O. & R. Co.'s No. 4 L. B. McComb, 1,134 ft. NW, 873 ft. NE at right angles out of SW cor. of L. Smith Sur. ..... Drlg. shale 950 ft.
Humble O. & R. Co.'s No. 22 Moore, L. Smith, 933 ft. SW of No. 21 ..... Drlg. shale 1,608 ft.
Humble O. & R. Co.'s No. 31 Moore, L. Smith Sur., 933 ft. SW of No. 16 ..... Drlg. shale 977 ft.
Humble O. & R. Co.'s No. 39 Moore, L. Smith Sur., 933 ft. SW of No. 38 ..... Drlg. shale 4,850 ft.
Humble O. & R. Co.'s No. 48 South Texas Dev. Co., Theo. Slade Sur., 951 ft. SE of No. 1, 951 ft. NE of No. 7 ..... Sand 5,163 ft.; cmtd. csg.
Humble O. & R. Co.'s No. 51 South Tex. Dev. Co., Theo. Slade Sur. ..... Sand 5,157 ft.; cmtd. csg.
Humble O. & R. Co.'s No. 1-D South Tex. Dev. Co., 344 ft. E of center of W line of T.&N.O. Sur. No. 15.. Abd. 5,062 ft.
Humble O. & R. Co.'s No. 2-D South Tex. Dev. Co. ..... Drlg. shale 3,645 ft.
Humble O. & R. Co.'s No. 1-B Williams ..... Sand 5,141 ft.; cmtd. csg.
Moore & Bruton's No. 3 W. N. Hooper, I.&G.N. No. 11 Sur., midway between Nos. 1 and 2 ..... Drlg. clay 350 ft.
Mortex Oil Corp.'s No. 1 J. C. Young, Wilson Strickland Sur., 231 ft. from E line, 131 ft. from S line of 2½ acres ..... Comp. 5 bbls. per hr.; ½-in. choke, 5,079 ft.

Republic Prod. Co.'s No. 4 Griffin, Wilson Strickland Sur., 270 ft. NW of J. N. Newman's No. 1 Young .. Rigging.
Strake Pet. Corp.'s No. 2 Etheridge, S. H. Bryan Sur., 467 ft. E line, 2,350 ft. S line lease ..... Cmtd. csg. 5,118 ft.
Strake Pet. Co.'s No. 3 Keystone Mills, S. H. Bryan Sur... Comp. 100 bbls. per hr.; ½-in. choke, 5,109 ft.

Strake Pet., Inc.'s No. 2 Krohn, Stephen Bryan Sur. ... Rig.
Sun Oil Co.'s No. 12 Foster, J. Bricker Sur., 1,400 ft. SE of No. 13 ..... Comp. 88 bbls. per hour; ½-in. choke, 5,140 ft.

Sun Oil Co.'s No. 32 Foster, J. Bricker Sur., 1,358 ft. S, 1,613 ft. E of lease and survey line ..... Cmtd. csg. 5,135 ft.
Sun Oil Co.'s No. 3 Keystone Mills, 429 ft. E line, 1,534 ft. S line ..... Comp. 85 bbls. per hour; ½-in. choke, 5,132 ft.

Sun Oil Co.'s No. 5 Keystone Mills, 1,271 ft. E line, 433 ft. W line ..... Comp. 88 bbls. per hour; ½-in. choke, 5,137 ft.

Sun Oil Co.'s No. 6 Keystone Mills, 1,057 ft. S of No. 5 and 875 ft. W of No. 2 ..... Drlg. shale 1,850 ft.
Sun Oil Co.'s No. 7 Keystone Mills, A. Steele Sur., 1,000 ft. S of No. 6 and 877 ft. W of No. 3 ..... Spudding.
Sun Oil. Co.'s No. 9 Keystone Mills, A. Steele Sur., 437 ft. S of N line, 906 ft. W of No. 5 ..... Drlg. shale 2,000 ft.
Texas Unity Oil Co.'s No. 1 Keystone Mills ..... Drlg. shale 3,729 ft.
West Prod. Co.'s No. 1 Foster Lbr. Co., 467 ft. N line, 650 ft. W line, Sec. 3, T.&N.O. Sur. ..... T.D. 5,565 ft.; P.B. to 5,135 ft.

ORANGE—ORANGE COUNTY

Gulf Prod. Co.'s No. 12 Hager-Moore (W.O.) ..... Drlg. shale 3,272 ft.

PORT NECHES—ORANGE COUNTY

Texas Co.'s No. 1-B Polk, Jacob Beaumont Sur., 150 ft. NE cor. ..... Drlg. gumbo 3,112 ft.
Texas Co.'s No. 2-B Polk, 695 ft. N, 150 ft. S of NE cor. of N. Jacob Beaumont Sur. ..... Drlg. shale 1,266 ft.
Texas Co.'s No. 4 Kuhn, 150 ft. E, 150 ft. N of NW cor. of lease ..... Drlg. clay 100 ft.

LIVINGSTON—POLK COUNTY

Vick Borsodi et al's No. 1 West, E 3½ acres of 35 acres Roberts tract, A. Viesca Sur. ..... Drlg. shale 4,030 ft.
Gist Oil Co.'s No. 1 Kavanaugh Collins, A. Viesca Sur., 150 ft. NE, 150 ft. NW, SE cor. G. P. Reid's 740-ac. tract ..... S.W. 4,387 ft.; abd.
Gist Oil Co.'s No. 1 Kingsbury County Holding Corp., A. Viesca Sur., 150 ft. N at right angles and 193 ft. E along S line of tract ..... Derrick.
Humble O. & R. Co.'s No. 1 Grandbury, 1,320 ft. N, center E and W of 50-ac. tract ..... Drlg. shale 2,137 ft.
Polk County Drlg. Co.'s No. 1 Cooper, 330 ft. S, 200 ft. E, NW cor. 12½ acres, A. Viesca Sur. ..... Drlg. shale 1,420 ft.
Shell Pet. Corp.'s No. 2 Davis & Holmes, A. Viesca Sur., 485 ft. N, 376 ft. W of NE cor. of Jim Duff 35-ac. tract ..... T.D. 4,400 ft.; resetting tubing
Skelly Oil Co.'s No. 1 Sanders, 755 ft. N of E line, 305 ft. S of N line, Sanders' 40 acres, A. Viesca Sur. ..... T.D. 4,315 ft.; fishing tubing.

GRETA—REFUGIO COUNTY

Atlantic and Alamo Oil Co.'s No. 1-E J. M. O'Brien, 340 ft. S line, 466 ft. E line ..... Drlg. sand 4,378 ft.
Atlantic-Alamo's No. 2-E O'Brien, 933 ft. N of No. 1, 466 ft. E line ..... Derrick.
Atlantic-Alamo's No. 3-E O'Brien, 933 ft. from No. 2, 466 ft. E line ..... Drlg. shale 1,289 ft.
Atlantic-Alamo's No. 5-E O'Brien, 933 ft. N of No. 4, 319 ft. E line ..... Sand 4,407 ft.
Atlantic Oil Prod. Co.'s No. 2-C O'Brien, 1,992 ft. N of No. 1 ..... Drlg. shale 1,259 ft.
Atlantic Oil Prod. Co.'s No. 3-C O'Brien, 2,788 ft. S of W line, 625 ft. W of E line ..... Drlg. shale 3,520 ft.
Atlantic Oil Prod. Co.'s No. 4-C O'Brien, 466 ft. out ..... Cmtd. csg. 1,274 ft.
Atlantic Oil Prod. Co.'s No. 5-C O'Brien, 1,193 ft. S of N line, 623 ft. E line ..... Spudding.
Atlantic Oil Prod. Co. and Heyser & Heard's No. 2 O'Brien ..... Drlg. sandy shale 3,789 ft.
Circle W Oil Co.'s No. 3 O'Brien, 795 ft. S of No. 4, 466 ft. E line ..... Comp. 600 bbls.; ¼-in. choke, 4,402 ft.

Circle W Oil Co.'s No. 4 O'Brien, 795 ft. S of No. 2, 466 ft. E line ..... Drlg. sand 4,400 ft.

Dash Prod. Co.'s No. 1 E. J. J. O'Brien, 466 ft. S of N line, center E and W of tract, N. S. Crunk Sur. .. Drlg. 1,260 ft.
Dash Prod. Co.'s No. 3 O'Brien, N. S. Crunk Sur., 645 ft. of W line, 301 ft. at right angles R.R. ..... T.D. 4,400 ft.; S.O.; washing in.
Floboots Oil Corp.'s No. 1 J. J. O'Brien, 466 ft. S of N line, 466 ft. E line, 50-ac. tract, N. S. Crunk Sur.. Derrick.
Floboots Oil Corp.'s No. 1-C O'Brien, E. H. Winfield Sur., 466 ft. SE cor. Lot 14 ..... Comp. 310 bbls.; ¼-in. choke; T.D. 4,409 ft.

Floboots Oil Corp.'s No. 2-C O'Brien, 466 ft. out of SW cor. Lot 12 ..... Drlg. shale 4,340 ft.
Floboots Oil Corp.'s No. 1-B O'Brien, 466 ft. out of SW cor. ..... Drlg. sand 4,374 ft.
Greta Oil Corp.'s No. 1-C O'Brien, 350 ft. S line, 150 ft. E at right angles to highway ..... Drlg. shale 1,947 ft.
Greta Oil Corp.'s No. 2-C O'Brien, 250 ft. N line and 150 ft. E line at right angles to highway, Winfield Sur. ..... Drlg. shale 2,950 ft.
Greta Oil Co.'s No. 2-B O'Brien, 933 ft. E of No. 1-B.. Comp. 500 bbls.; ¼-in. choke, 4,397 ft.

Greta Oil Corp.'s No. 3-B O'Brien, 1,154 ft. E of No. 2-B, 460 ft. S of N line, 460 ft. NW of E line ..... Comp. 500 bbls.; ¼-in. choke, 4,398 ft.

Greta Oil Corp.'s No. 4-B O'Brien, 466 ft. NW of E line, 1,516 ft. E of W line, E. H. Winfield Sur. .... Comp. 650 bbls.; ¼-in. choke, 4,398 ft.

Greta Oil Corp.'s No. 5-B O'Brien, 466 ft. out of SW cor. of tract, E. Winfield Sur. ..... Rigging.
Humble O. & R. Co.'s No. 1 F. Heard, 466 ft. out of NW cor. Ximines Sur. ..... **Rigging.**
Edwin M. Jones' No. 2 O'Brien, E. H. Winfield Sur., Blk. 4, 466 ft. from N line in center E and W ..... Drlg. shale 3,914 ft.
Edwin M. Jones' No. 3-G O'Brien ..... **Derrick.**
Nesral Oil Co.'s No. 1 Ira Heard, M. J. Ximines Sur., 330 ft. out of NW cor. of 25-ac. tract ..... Drlg. shale 4,398 ft.
Nesral Oil Co.'s No. 2 O'Connor, 1,586 ft. SE of No. 1 and 466 ft. W of E line (R/A to EL) ..... Drlg. shale 4,370 ft.
Nesral Oil Co.'s No. 5 O'Connor ..... Derrick.
Rutherford and Atlantic's No. 2-B O'Brien ..... Drlg. sand 4,366 ft.
Southwest Oil Corp.'s No. 1-E O'Brien, E. H. Winfield Sur., 466 ft. E of W line, 466 ft. S of N line.. Comp. 600 bbls.; ¼-in. choke, 4,390 ft.

Southwest Pet. Corp.'s No. 2-A O'Brien, E. H. Winfield Sur., 466 ft. NW cor. 25-ac. tract ..... Drlg. shale 4,350 ft.
Texas Gulf Prod. Co.'s No. 1 J. M. O'Brien, J. A. Peoples Sur., 466 ft. SW cor., Blk. 3 ..... Comp. 450 bbls. ¼ and 3/16-in. chokes, 4,395 ft.

Texas Gulf Prod. Co.'s No. 2 J. M. O'Brien, J. A. Peoples Sur., 466 ft. NW cor., Blk. 3 ..... **Moving in material.**
Texas Gulf Prod. Co.'s No. 1 J. M. O'Brien, J. H. Winfield Sur., 466 ft. NS line, center E and W, Blk. 13 ..... **Moving in material.**
United Prod. Co.'s No. 6 Fox est., Wm. Hews and L. Brown Sur., 2,956 ft. N line, 787 ft. E line ..... Setting screen 4,390 ft.
United Prod. Co.'s No. 7 W. T. Fox, 695 ft. SE of No. 6, Hews & Brown Sur. ..... Drlg. shale 1,191 ft.
United Prod. Co.'s No. 8 Fox est., 1,473 ft. N, 466 ft. E of SE cor. N. S. Cronk Sur. ..... Drlg. shale 4,380 ft.
United Prod. Co.'s No. 9 Fox, 880 ft. NE of No. 6, Hews & Brown Sur. ..... Drlg. shale 1,215 ft.
United Prod. Co.'s No. 10 Fox, 894 ft. NE of No. 9, Hews & Brown Sur. ..... Derrick.
United Prod. Co.'s No. 11 Fox, 867 ft. NE of No. 10, Hews & Brown Sur. ..... Derrick.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 9 Clay, 600 ft. NE of No. 1 Clay, J. F. Perry Sur., 757-ac. tract ..... Standing 2,255 ft.

BOLING—WHARTON COUNTY

Asher et al's No. 2 Rogers, S. F. Austin Sur., 685 ft. NE, 115 ft. NW of S cor. W. G. Reagin & Son's tract Standing 1,215 ft.

SOUTH LOUISIANA FIELDS

ASSUMPTION PARISH

Barnsdall Oil Co.'s No. 1 Williams, 330 ft. out of NE cor. Sec. 38-14s-14e ..... T.D. 7,542 ft.; hole bridged at 5,900 ft.; caving 7,520 ft.

VINTON—CALCASIEU PARISH

Starks & Broker's No. 11 A. J. Vincent, NW cor. SE Sec. 33-10s-12w ..... Moving in material.
Wilson Broach's No. 4 Wilson ..... Sanding 3,806 ft.
Wilson Broach's No. 10 Wilson Strip, 650 ft. N, 379 ft. E. SW cor. SE NE Sec. 33-10s-12w ..... Derrick.
Gulf Ref. Co.'s No. 7 J. W. Gardner, 308 ft. E, 550 ft. N, SW cor. SE NE Sec. 33-10s-12w ..... Drlg. shale 4,181 ft.
Vinton Pet. Co.'s No. 1 Vincent ..... Spudding.
Vinton Pet. Co.'s No. 22 Vincent, 685 ft. N, 620 ft. E of SW cor. Sec. 34-10s-12w ..... Standing 2,774 ft.

CAMERON MEADOWS—CAMERON PARISH

Burton-Sutton Oil Co.'s No. 1 School Land, 500 ft. W, 20 ft. N, SE cor. Sec. 16-14s-13w ..... Standing 6,825 ft.
Humble O. & R. Co.'s No. 4 Cameron Meadows, 360 ft. N, 600 ft. W, SE cor. Sec. 21-14s-13w ..... Rigging.

CALCASIEU PARISH

Fred Oil Co.'s No. 1 Farszt, 566 ft. N, 300 ft. W, SE cor. NW SE Sec. 26-8s-10w ..... Spudding.
Union Sulphur Co.'s No. 1 Barbe, 2,681 ft. W, 2,647 ft. S of NE cor. Sec. 1-9s-8w ..... Rigging.
Union Sulphur Co.'s No. 1 Stout, 1,237 ft. N, 1,167 ft. W of SE cor. Sec. 36-8s-8w ..... Abd. 7,998 ft.

CHOCTAW—IBERVILLE PARISH

Standard Oil Co. of La.'s No. 5 Myrtle Grove, 1,700 ft. N, 200 ft. W, SE SW cor. SW Sec. 52-9s-11e ..... Drlg. gumbo 850 ft.

EDGERLY—CALCASIEU PARISH

S. A. Emerson's No. 13 Hunter, 465 ft. N, 90 ft. E, SW cor. Sec. 21-9s-11w (W.O.) ..... Rigging up to deepen 4,118 ft

EVANGELINE PARISH

J. E. Ledeau's No. 2 Vidrine, 260 ft. W, 400 ft. S, NE cor. Sec. 47-3s-2e ..... Standing 1,740 ft.

QUEYDAN—VERMILION PARISH

Pure Oil Co.'s No. 5 Alliance Trust Co., 525 ft. from N line, 580 ft. from W line of Sec. 34-11s-1w ..... Abd. 4,895 ft.
Pure Oil Co.'s No. 1 Grady Lee-Humble, 2,031 ft. E. 225 ft. N of NW cor. Sec. 34, in Sec. 27-11s-1w... Drlg. sand 3,395 ft.
Pure Oil Co.'s No. 4 Mulvey, 1,721 ft. from N line, 2,515 ft. from W line of Sec. 34-11s-1w ..... Drlg. lime 4,782 ft.

LAFOURCHE PARISH

Gulf Ref. Co.'s No. 1-B Community, 1,685 ft. E, 365 ft. NW Sec. 26-21s-22e ..... Drlg. sand 3,789 ft.
Barnsdall Oil Co.'s No. 1 Harang, Lot 6, in Twp. 17s-20e. Drlg. shale 6,049 ft.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 9 Lake Barre-L.L.&E., 4,013 ft. S, 305 ft. E of NW cor. Sec. 30-21s-20e in Sec. 36-21s-19e ..... Drlg. anhydrite 3,325 ft.
Texas Co.'s No. 22 State-Lake Barre, 150 ft. northerly from No. 18 ..... Drlg. lime and shale 4,001 ft.

LAKE WASHINGTON—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 11 Cockrell & Moran ..... Drlg. gumbo 400 ft.
Humble O. & R. Co.'s No. 12 Cockrell & Moran ..... Standing 1,169 ft.
Humble O. & R. Co.'s No. 3 La. State, Twp. 20s-26e, 2,920 ft. N, 19 ft. E of station ..... Drlg. shale 3,139 ft.

LOCKPORT—CALCASIEU PARISH

Magnolia's No. 9 Farquaher, 200 ft. N, 150 ft. E of SW cor. NE SE Sec. 3-10s-9w (O.W.D.D.) ..... Cmtd. csg. 5,684 ft.
Magnolia Pet. Co.'s No. 4-A Watkins fee, 185 ft. E, 200 ft. N of SW cor. NW NE Sec. 9-10s-9w ..... Drlg. shale 3,798 ft.
Union Sulphur Co.'s No. 1 Moss (W.O.) ..... Drlg. sand 1,996 ft.

HACKBERRY—CAMERON PARISH

Gulf Ref. Co.'s No. 12 Irwin, 865 ft. N, 518 ft. E of SW cor. Sec. 44-12s-9w ..... Drlg. sand 7,348 ft.; S.O.
Pop Oil Co.'s No. 1 Yount Lee, 3,996 ft. W, 100 ft. N of SE cor. Sec. 19-12-10w ..... Cmtd. csg. 3,922 ft.
S. H. Rhodes' No. 1 ..... T.D. 2,970 ft.; abd. in salt.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Barnsdall Oil Co.'s No. 1 Heyd, 330 ft. SW cor. of E½ SW Sec. 7-9s-6w ..... Drlg. sand 5,435 ft.

Magnolia Pet. Co.'s No. 2 Willett, 990 ft. N, 330 ft. E of SW cor. NW Sec. 7-9s-6w ..... Drlg. shale 7,140 ft.

Shell Pet. Corp.'s No. 5 Heyd, 325 ft. S of NW cor. of Sec. 18-9s-7w, and 225 ft. W of E line of Sec. 13. Cmtd. csg. 6,827 ft.

Shell Pet. Corp.'s No. 6 Heyd, 660 ft. S line, 660 ft. W line of lease, Sec. 18-9s-7w ..... Cmtd. csg. 4,445 ft.; T.D. 4,770 ft.

Shell Pet. Corp.'s No. 3 Stafford, 330 ft. from W line and 265 ft. from S line of NW Sec. 18-9s-6w ..... Comp. 410 bbls.; ¼-in. choke; T.D. 7,021 ft.

Shell Pet. Corp.'s No. 1 Tuten, 265 ft. S, 330 ft. W of NE cor. SW Sec. 13-9s-7w ..... Temp. S.D. 1,337 ft.

JEFFERSON DAVIS PARISH

B. D. Finley et al's No. 1 Clarphy Lognion, SW NW Sec. 22-10s-4w, 300 ft. N, 50 ft. W of SW NW ..... T.D. 5,465 ft.; standing.

Humble O. & R. Co.'s No. 2 Devilbiss, 1,850 ft. S, 350 ft. W of NE cor. Sec. 14-9s-4w ..... T.D. 7,843 ft.; sidetracked 7,100 ft.; drlg. new hole 7,128 ft.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 13 Houssiere-Latrielle, Sec. 47-9s-2w, 300 ft. E of No. 12 ..... Drlg. anhydrite 5,282 ft.

EAST BATON ROUGE PARISH

British-American Oil Co.'s No. 1 Louisiana, 2,750 ft. NE NW cor. Sec. 79, and 1,700 ft. N of NE Sec. 79, in Sec. 6-8s-1e ..... Fishing D.S. stuck at 4,444 ft.

LEESVILLE—LA FOURCHE PARISH

Texas Co.'s No. 7 L.L.E., 2,921 ft. S, 300 ft. W of NE cor. Sec. 27-21s-22e ..... Cmtd. csg. 3,629 ft.

PORT BARRE—ST. LANDRY PARISH

Cale O. & G. Co.'s No. 1 Thompson ..... Drlg. gumbo 1,510 ft.

Campbell et al's No. 1 J. E. Jeonsonne, Sec. 7-6s-5e, 30 ft. N of S line in center E and W of 30-ac. tract. ..Cmtd. csg. 3,825 ft.

Texas Co.'s No. 17 Botney Bay, 1,800 ft. S 3 deg. W, 600 ft. N 32 deg. most southern NE 560 deg. tract, Sec. 4-6s-5e ..... Derrick.

PLAQUEMINES PARISH

Southern Sulphur Co.'s No. 1 Bay Adams ..... Rig.

Texas Co.'s No. 9 Garden Island Bay, 4,791 ft. S, 2,504 ft. W of NE cor. Sec. 104-23s-32e ..... Drlg. salt 2,155 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 1 Lacey Frank, 1,640 ft. N, 1,175 ft. W, SE cor. Sec. 16-10s-4e ..... T.D. 1,400 ft.; lost hole; abd.

STARKS—CALCASIEU PARISH

Gulf Ref. Co.'s No. 11 Lutcher-Moore (D.D.), 1,270 ft. W, 885 ft. N of SE cor. NE Sec. 19-9s-12w ..... Drlg. sticky shale 4,480 ft.

Union Sulphur Co.'s No. 3 Industrial Lbr. Co., 2,400 ft. N, 412 ft. W, SE cor. Sec. 19-9s-12w ..... Drlg. rock 3,423 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 779 fee, 1,153 ft. N, 795 ft. E of center of Sec. 29-9s-10 ..... Drlg. shale 2,639 ft.

Union Sulphur Co.'s No. 781 fee, 1,768 ft. W, 726 ft. N of C Sec. 29-9s-10w ..... Drlg. shale 2,332 ft.

Union Sulphur Co.'s No. 783 fee, Sec. 29-9s-10w ..... Salt 5,117-5,761 ft.; drlg. new hole 4,529 ft.

Union Sulphur Co.'s No. 786 fee ..... Drlg. gumbo 1,224 ft.

ST. BERNARD PARISH

Southern Sulphur Co.'s No. 1 Lake Lery, 400 ft. W, 500 ft. N, SW cor. Sec. 28-13s-15e ..... Cmtd. csg. 212 ft.

Southern Sulphur Co.'s No. 1 State Lake Bargne, 850 ft. N, 330 ft. E, SE cor. Sec. 33-13s-15e ..... Cmtd. csg. 650 ft.

ST. LANDRY PARISH

Gaunch Synd.'s No. 1 Lewis, 300 ft. N and E of SW cor. NW NE Sec. 29-5s-6e ..... Spudding.

H. H. Hotchins Lbr. Co.'s No. 1 Whiteman Lbr. Co., 250 ft. out of SW cor. NE Sec. 15-5s-6e ..... Cmtd. csg. 710 ft.

ST. MARTIN PARISH

Standard Oil Co. of Kansas' No. 1 E. B. Hopkins, Sec. 33-10s-6e ..... Cmtd. 6,010 ft.

TERREBONNE PARISH

Texas Co.'s No. 9 State-Caillou Island ..... Rigging.

Texas Co.'s No. 6 State Bay-St. Elaine, 700 ft. S of No. 3, Sec. 17-22s-18e ..... Drlg. heaving shale 4,334 ft.

Texas Co.'s No. 1 State Bay-St. Elaine, 3,900 ft. N, 2,300 ft. E of SW cor. Sec. 8-22s-18e ..... Moving in.

VERNON PARISH

E. Dawson's No. 1 Delta Land & Timber Co., C SW SW Sec. 2-1n-11e ..... T.D. 2,820 ft.; sidetrack 2,615 ft. drlg. new hole, sand 2,710 ft.

R. E. Kay et al's No. 1 Willis, 350 ft. N, 400 ft. E, SW cor. SE SE Sec. 32-3-9w ..... Drlg. gumbo 3,940 ft.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 7 Wilburn, 625 ft. N 60 deg. W, 1,165 ft. N 29 deg. E, SE of Lot 2, Sec. 9-11s-12e. . Drlg. shale 5,156 ft.

TEXAS

MISCELLANEOUS WILDCATS

AUSTIN COUNTY

R. R. Mitchell's No. 1 H. Schlerda, J. F. Fitzgibbons Sur., 300 ft. out NE cor. 96-ac. tract ..... Moving in material.

BRAZOS COUNTY

H. Elliott et al's No. 1 W. F. Odom, near center of 379-ac. tract in SW cor. of Isaac Curll Sur. ..... Derrick.

F. H. Scott's No. 1 Klintworth, I. Curd Sur., 300 ft. from N line, 400 ft. from E line ..... Standing 1,487 ft.

CHAMBERS COUNTY

Mills & Jones' No. 1 Gau, J. S. Roberts Sur., 255 ft. W, 1,052 ft. S of NE cor. of 138-ac. tract ..... Preparing to resume operations. 5,626 ft.

Smith & Lavender's No. 1 McCormick, F. Ludlow Sur., 150 ft. NE cor. ..... Derrick.

COLORADO COUNTY

Columbus Dev. Co.'s No. 1 Miller, H.T.&B. No. 8, 2,268 ft. E of W line, 1,345 ft. S of N line of survey .. Drlg. shale 3,900 ft.

Humble O. & R. Co.'s No. 1-C Powell, I.&G.N.R.R. Sur., 1,086 ft. E, 578 ft. S of NW cor. Blk. 48 ..... Drlg. shale and lime 6,200 ft.

FAYETTE COUNTY

Columbus Drlg. Co. and Gulf Prod. Co.'s No. 1 Turner, 400 ft. E of river, 300 ft. N of S line, J. Petty Sur. .. Drlg. shale 3,000 ft.

FORT BEND COUNTY

Fresno Oil Corp.'s No. 1 M. T. Wood, T. Gleason Sur., center of 10-ac. tract (Blk. 474) ..... T.D. 5,082 ft.; standing.

A. N. Phillips et al's No. 1 Grigar, 2,150 varas E line, 1,550 varas N line, J. S. O'Connor Sur. ..... Drlg. shale 700 ft.

Quintana Oil Co. and Great So. Life's No. 1 Great So. Life, Ed Robertson Sur., 600 ft. S of N line, 500 ft. W of Brazos River ..... Drlg. shale 5,229 ft.

GRIMES COUNTY

Clark & Dodd's No. 1 Murry, 150 ft. W line, 300 ft. S line, Anderson Sur. ..... Spudded; standing.

Cambrian Oil Co.'s No. 1 W. V. Sangster, John Moore Sur., 300 ft. out of most westerly NW cor. of 218-ac. tract ..... Derrick.

Foster et al's No. 1 Quinn, 7,100 ft. from W line, 3,900 ft. from N line of S. F. Austin Sur. ..... Standing 65 ft.

Humble O. & R. Co.'s No. 1 Seaton, F. G. Seaton Sur., 260 ft. N and W. 71-ac. tract ..... Drlg. shale 1,310 ft.

H. C. Ratcliff's No. 1 Fulgham, A. Tuttle Sur., 600 ft. N line, 540 ft. W line of lease ..... Derrick.

HARRIS COUNTY

Cockburn Oil Corp.'s No. 1 C. Marcus, Wm. Hardin Sur., 1,500 ft. S along E line of 55-ac. tract from Buffalo Bayou and 300 ft. W at right angles ..... Abd. 6,295 ft.

Hamilton et al's No. 1 Hargroves, W.C.R.R. Sur. No. 10, Blk. 1, 1,750 ft. E line, 645 ft. N line ..... Heaving shale 6,946 ft.; abd.

J. A. Hodges' No. 1 Scott, 200 ft. S, 900 ft. W of intersection of Crosby Huffman, F. Rankin Sur. ..... Drlg. sand 510 ft.

H. B. Jordan's No. 1 Cochran, J. L. Jordan Sur., 1,950 ft. S line, 1,930 ft. E line ..... Standing 2,045 ft.

Russell et al's No. 1 Burt & Griffith, S. Keely Sur., 200 ft. N line, 200 ft. E of highway ..... Drlg. shale 300 ft.

Simon & Link's No. 1 Ellis, 658 ft. from N line, 1,130 ft. from W line of Sec. 22, Geo. Ellis Sur. ..... Abd. 6,560 ft.

S. E. Young et al's No. 1 Paddock, J. Cunningham Sur., 300 ft. W of E line of Blk. 41 on line dividing Blks. 46 and 47 ..... Drlg. shale 680 ft.

JACKSON COUNTY

Continental Oil Co.'s No. 1 Vincek, V. Garcia Sur., 1,800 ft. W, 200 ft. N of SE cor. of Lot 17, Bennett Subd. ..... Drlg. shale 6,300 ft.

Ed Parsons et al's No. 1 Clark, 300 ft. out SW cor. of R. J. and M. Clark lease, A. S. White Sur. ..... Derrick.

JASPER COUNTY

Turnball & Erwin's No. 1 Green, W. B. Green Sur., 2,269.3 varas S, 857 varas W of NE cor. ..... Drlg. shale 3,460 ft.

JEFFERSON COUNTY

Sun Oil Co.'s No. 1 Paggi, 990 ft. W, 1,610 ft. N of SE cor. of T.&N.O. Sur. No. 32 ..... Sand 6,003-31 ft; showing oil; resetting screen and swabbing; to test.

LEON COUNTY

Shell Pet. Corp.'s No. 1 A. Boggs, 406 ft. N, 1,128 ft. E of inside line of lease, John Carter Sur. ..... Drlg. shale 5,685 ft.

LIBERTY COUNTY

W. W. Algren, tr.'s No. 1 Nona Mills Lbr. Co., J. E. Mayfield Sur., 400 ft. from W and 200 ft. from N line of lease ..... Drlg. 1,057 ft.

Hamill & Smith's No. 1 Peavey, 2,083 ft. N, 330 ft. W of SW cor. J. S. Johnson's 319-ac. tract ..... Abd. 6,135 ft.

Thomas et al's No. 1 A. Ercke, 600 ft. E of W line, 2,350 ft. N of S line, A. H. Ercke Sur. in Reason & Green Sur. ..... Drlg. lime 3,225 ft.

MATAGORDA COUNTY

Continental Oil Co.'s No. 1 Boker, 400 ft. out of SW cor. Lot 17, Robbins & Middle Subd., J. W. Criswell Sur. ..... Stuck D.S. in heaving shale 6,504 ft.; fishing at 5,200 ft.

Oils Consolidated, Inc.'s No. 1 Hawkins, Daniel McCarthy Sur., 1,240 ft. NE, 350 ft. NW of S cor. .... Derrick.

United North & South Dev. Co.'s No. 1 Unit 6 (No. 2 Stoddard), 25 ft. each way out of NW cor. of Lot 19, Buckeye Townsite ..... T.D. 7,872 ft.; cutting and pulling screen.

United North & South Dev. Co.'s No. 1 Unit 25, 1,325 ft. S, 1,000 ft. E of No. 1 Unit 6 ..... T.D. 7,775 ft.; set whipstock; sidetracking.

MONTGOMERY COUNTY

Gholson Bros.' No. 1 Crawford, 757 ft. due S from SE cor. of Mary Guber 48-ac. tract ..... Drlg. shale 4,150 ft.

L. C. Thorpe's No. 1 Sutherland, 2,450 ft. E line, 350 ft. N line of C. McRay Sur. ..... T.D. 1,800 ft.; standing.

Stanolind O. & G. Co.'s No. 1 Theis, J. H. Edwards Sur., 466 ft. W line, 466 ft. S line ..... Drlg. shale 5,363 ft.

ORANGE COUNTY

Texas Louisiana Oil Co.'s No. 1 Starks, 2,450 ft. N of NW cor. M. Delano Sur. 68, 10,500 ft. E at right angles ..... Spudding.

POLK COUNTY

D. B. McCall's No. 1 Faulkner, 350 ft. W of center of E line of 200-ac. tract, G. B. Dikes Sur. ..... Standing 60 ft.

Dick Schwab's No. 1 Kirby & West, Geraldus Thomas Sur., 1,000 ft. N of N line of P. A. Sublett Sur., and 3,000 ft. W of E line of Thomas Sur. ..... Sand showing gas 4,711-71 ft.; cmtd. csg. 4,700 ft.

C. E. Stewart's No. 1 Stephenson, E. Stevenson Sur. (Abst. 761), 1,633 ft. from N line, 920 ft. from W line of 217 acres ..... Rig.

REFUGIO COUNTY

C. B. Bunte et al's No. 1 F. B. Rooke, J. M. Aldritte Sur., CWL of Sec. 4 ..... Derrick.

Humble O. & R. Co.'s No. 9 O'Connor, 4,380 ft. SW of No. 1 O'Connor ..... Abd. 4,025 ft.

Texas Co.'s No. 1 Rooke, J. M. Aldritte Sur., 7,500 ft. S 53 deg. W, 850 ft. 37 deg. W of N cor. Sur. .... Drlg. sandy shale 4,080 ft.

Wellington Oil Co.'s No. 1 Roach, R. J. Downey Sur., 1,250 ft. NW line, 515 ft. NE line of Tract No. 1 .... Rigging.

VICTORIA COUNTY

J. F. Camp's No. 1 Maurer, 330 ft. NE cor. Maurer's 178 acres, R. Manchola Sur. ..... Drlg. shale 650 ft.

Stoneleigh O. & G. Co.'s No. 1 Dietzel, 330 ft. out of NW cor. of Dietzel's 95-ac. tract, R. Manchola Sur. . Rigging.

Stoneleigh O. & G. Co.'s No. 2 E. B. Terrell, 330 ft. out of SE cor. of Terrell's 215-ac. tract, R. Manchola Sur. ..... Moving in derrick.

Stoneleigh O. & G. Co.'s No. 1 Trybble, 330 ft. out of SE cor. Trybble's 122-ac. tract, R. Manchola Sur. .. Moving in derrick.

Stoneleigh O. & G. Co.'s No. 1 Zimmer, R. Manchola Sur., 1,007 ft. SW line, 645 ft. SE line ..... Drlg. shale 2,355 ft.

The Texas Co.'s No. 6-A McFaddin, 5,600 ft. from NE line, 250 ft. from SE line of A. J. Gray ..... Gas sand 3,039-49 ft.; pumping wtr. and mud into sand to kill pressure.

The Texas Co.'s No. 7 McFaddin, 6,600 ft. S 15 deg. W, 450 ft. N 75 deg. W at right angles from the NE cor. of the A. J. Gray Sur. ..... T.D. 1,176 ft; blowing gas and mud.

WALLER COUNTY

Hobson & Moore's No. 1 Peters, Justo Liendo Sur., 590 ft. W of creek and 1,144 ft. N of S cor. ..... Shale 2,960 ft.; washing to bottom.

WASHINGTON COUNTY

George W. Strake's No. 1 Henry Wehmeyer, M. Byrd Sur., 3,000 ft. from W line, 500 ft. from N line of 599.50-ac. tract ..... T.A. 5,590 ft. in sandy shale.

WHARTON COUNTY

Boggs & Hammond's No. 1 C. T. Kountze, Morris & Cummings Sur., 1,250 ft. S line, 2,750 ft. E line .... Drlg. shale 5,363 ft.

Monarch Oil Co.'s No. 1 Schateck, 150 ft. each way out of SW cor. G. W. Reynolds Sur. ..... Derrick.

Nabers et al's No. 1 Lurker, 210 ft. out of SE cor. of N½ SW Sec. 58, E.T.R.R. Sur. ..... Washing to bottom 5,026 ft.

Pure Oil Co.'s No. 1 W. Garrett, Sec. 28, 4,456 ft. SE, 1,690 ft. NE of W cor. ..... Drlg. shale 6,343 ft.

Pure Oil Co.'s No. 1 A. J. Wilder, T. W. Hurd Sur., 509, 2,575 ft. SE, 1,690 ft. NE from W cor. of Sec. 28. Drlg. sand and shale 5,914 ft.

Pure Oil Co.'s No. 1 Stewart, 2,419 ft. NW, 1,650 ft. NE of S cor. of Sec. 25, Morris & Cummings Sur. ..... T.D. 8,067 ft.; cmtd. back to sand 5,963-71 ft.; resetting screen.

Pure Oil Co.'s No. 1 Chas. T. Kuntze, 2,183 ft. from NW line, 467 ft. from SW line, Sec. 27, Morris & Cummings Sur. ..... Fishing 7,134 ft.; a show at 7,128-34 ft.

Pure Oil Co.'s No. 1 W. H. Lancaster, Morris & Cummings Sur., Sec. 23, 1,650 ft. NW, 1,600 ft. SW of E cor. of section ..... Drlg. sand 5,236 ft.

Pure Oil Co.'s No. 1 Willis McIntyre, 1,650 ft. S of N line, 1,759 ft. S of E line of section ..... Drlg. shale 3,680 ft.

Pure Oil Co.'s No. 1 Wallace Houston, 858 ft. SE of NW line and 1,690 ft. NE of SW line, Sec. 28, (T. W. Heard Sur.) ..... Drlg. shale 5,177 ft.

Pure Oil Co.'s No. 1 Isaac Weaver, J. M. Brownson Sur., Sec. 22, 1,650 ft. out of N cor. of section .... Drlg. shale 6,181 ft.

Smith, McDannald and Pure Oil Co.'s No. 1 B. M. Yeamans, 330 ft. out of N cor. of B. M. Yeamans Sur., Abst. 913 ..... Tested S.W. at 6,196 ft.

Smith & McDannald and Shell Pet. Corp.'s No. 1 Ridgeway, 1,980 ft. from S, 660 ft. from W of NE cor. Sec. 1, H.&T.C. Sur. ..... T.D. 7,607 ft.; drill pipe stuck; reset whipstock 5,632 ft.; new hole 6,660 ft.; standing.

Summary of Operations in All Fields for September, 1933

SUMMARY OF COMPLETED WORK

	Comp.	Prod.	Dry	Gas
Eastern	264	965	21	28
Central Ohio	45	199	10	26
Lima	19	485	4	8
Indiana	7	57	1	2
Michigan	33	16,538	10	1
Kentucky	14	146	9	1
Illinois	1	0	1	0
Kansas	59	24,951	13	1
Oklahoma	98	40,549	31	6
N. Central Texas	109	4,907	37	2
E. Cent. and E. Tex.	343	21,296	7	0
West Texas	27	5,407	3	1
Texas Panhandle	14	2,597	0	1
Gulf Coast, Texas	104	90,488	26	3
Southwest Texas	74	7,031	40	3
North Louisiana	25	912	13	8
Gulf Coast, Louisiana	14	3,130	6	0
Arkansas	1	0	1	0
Mississippi	4	0	2	2
Alabama	1	0	1	0
E. Texas gas area	3	0	2	0
Montana	17	409	7	3
Wyoming	5	177	2	0
Colorado	1	138	0	0
New Mexico	1	310	0	0
Total Sept.	1,274	220,692	248	96
Total Aug.	993	195,630	279	88
Difference	281	25,062	31	8

RIGS AND WELLS DRILLING

	Rigs	Drlg.	Ttl.
Eastern	68	251	319
Central Ohio	21	91	112
Lima	1	26	27
Indiana	1	45	46
Michigan	111	131	242
Kentucky	2	49	51
Illinois	1	11	12
Kansas	33	104	137
Oklahoma	86	306	392
North Central Texas	41	165	206
E. Central and E. Texas	75	209	284
West Texas	21	94	115
Texas Panhandle	12	42	54
Gulf Coast	44	166	210
Southwest Texas	21	116	137
North Louisiana	39	101	140
Gulf Coast, Louisiana	9	51	60
Arkansas	8	28	36
Mississippi	11	19	30
Alabama	0	3	3
East Texas gas area	3	14	17
Montana	1	35	36
Utah	1	17	18
Wyoming	8	72	80
Colorado	6	50	56
New Mexico	3	55	58
Total Sept.	627	2,251	2,878
Total Aug.	631	2,090	2,721
Difference	4	161	157

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

Oklahoma Fields

Summary of Completed Wells

County—	Comp.	Prod.	Dry	Gas
Atoka	1	0	1	0
Carter	4	1,777	0	0
Comanche	1	0	1	0
Creek	14	931	6	0
Hughes	1	0	1	0
Jefferson	1	50	0	0
Kiowa	1	0	0	1
Lincoln	1	1,330	0	0
Logan	1	0	1	0
Marshall	1	0	1	0
Muskogee	1	0	1	0
Noble	4	12,000	2	1
Oklahoma	8	6,980	0	1
Osage	9	744	1	0
Okmulgee	5	40	1	1
Pawnee	1	0	1	0
Pontotoc	4	240	2	1
Pottawatomie	10	4,163	1	0
Seminole	14	5,059	5	0
Stephens	4	50	3	0
Tulsa	4	90	0	1
Wagoner	7	395	2	0
Tillman	1	0	1	9
Total September	98	40,549	31	6
Total August	70	14,458	28	4
Difference	28	26,091	3	2

Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Osage	5	24	29
Grant	1	0	1
Pawnee	1	2	3
Logan	0	7	7
Creek	15	33	48
Garfield	0	1	1
Kay	1	2	3
Kingfisher	1	0	1
Payne	0	5	5
Blaine	0	1	1
Noble	5	8	13
Ellis	0	1	1
Alfalfa	0	1	1
Wagoner	3	5	8
Tulsa	0	13	13
Muskogee	0	7	7
Okmulgee	1	19	20
McIntosh	0	2	2
Okfuskee	3	7	10
Carter	2	7	9
Stephens	0	16	16
Jefferson	1	8	9
Grady	0	1	1
Caddo	0	1	1
Comanche	0	2	2
Tillman	1	0	1
Beckham	0	4	4
Atoka	2	5	7
Greer	0	1	1
Marshall	2	6	8
Kiowa	0	2	2
Pushmataha	0	1	1
Washita	0	4	4
McCurtain	0	1	1
Oklahoma	19	31	50
Cleveland	1	0	1
Kingfisher	1	0	1
Hughes	3	6	9
Seminole	5	25	30
Lincoln	0	3	3
Pottawatomie	7	23	30
Pontotoc	2	9	11
Atoka	0	2	2
Coal	0	3	3
Murray	1	1	2
Pittsburg	3	6	9
Total September	86	306	392
Total August	74	299	373
Difference	12	7	19

WELLS COMPLETED

NOBLE COUNTY

20-20-2w Schoenwald, Shell Pet. et al 1 12,000
10-21-2e Eyler, Wentz & Feagin 1 ... dry
33-21-1w Walterman, Barnsdall Oil 2-A ..... gas
15-20-2w Jerome, Sinclair Prairie 1.. dry

Completed 4
Production 12,000
Dry 2
Gas 1
Gas production 5,750,000

PONTOTOC COUNTY

18-4-6 Starrett, Gilbert et al 1 ..... gas
12-4-7 Hammett, Westheimer & Daube 1 dry
20-5-8 Busby, W. A. Delaney 1 .. ... dry
25-5-4 Burke, Patsy Oil 2 240

Completed 4
Production 240
Dry 2
Gas 1
Gas production 14,000,000

SEMINOLE COUNTY

29- 9-6 Chase, Amerada Pet. 1 ..... dry
18- 8-7 Hart, Speare Drlg. Co. 1 590
9- 7-8 Jacobs, Boettcher & Blackwell.. 150
20- 9-6 Fixico, Phillips Pet. 6 918
22-10-7 Coleman, Anderson & Kerr 1-A dry
15- 7-8 Walker, Limestone O. & G. 8 .. 70
18- 7-8 Factor, Mid-Continent 4 25
23-11-6 Ray, Carter Oil 1, 7 hrs. 438
18-19-6 Noble, Barnsdall Oil 1 ..... dry
18- 9-6 Smith, Speare Drlg. Co. 1-B .... dry
20- 9-6 Fixico, Phillips Pet. 6 783
25- 6-7 Reed, Stanolind-Amerada 1, 15 hrs. 2097
32- 6-6 Tucker, Malernee et al 1 ..... dry
16- 7-8 Jacobs, Phillips Pet. 3 78

Completed 14
Production 5059
Dry 5

OSAGE COUNTY

33-24-7 Lewis Prod. 1 240
30-22-9 E. O. Plater 10 ..... dry
14-21-8 Pueblo Oil 5 125
27-21-9 Gray & Tolson 2 24
34-21-9 Clint Moore Est. 1 8
15-24-7 Prod. & Ref. Corp. 1 187
12-23-7 Texas Co. 1 110
12-23-7 Texas Co. 1 42
27-29-9 Clint Moore Est. 2-A 8

Completed 9
Production 744
Dry 1

OKLAHOMA COUNTY

2-11-3w Armour, Wofford Drlg. 1 (21 hrs.) 2271
22-11-3w Medders, Gulf Prod. of Okla. 5 (1½ hrs.) 519
36-12-3w School Land, Blackwell O. & G. 1 ..... gas
3-11-3w Freight House, Denver P. & R. 1 (2 hrs.) 861
15-11-3w Anderson, Stauffer & Stephens 1 (1¾ hrs.) 389
22-11-3w Holstein, Phillips Pet. 2 (4 hrs.) 2110
22-11-3w Fowler, Transit Oil 1 (4 hrs.) 830

Completed 7
Production 6980
Gas 1
Gas production 13,000,000

OKMULGEE COUNTY

7-15-12 Cousins, Mid-Tex Oil 1 ..... gas
14-15-12 Moore, Hutchinson et al 1 12
31-14-13 5 Acres, B. L. Wigton 1 19
1-14-14 Harris, Babcock Bros. 5 ..... dry
15-14-14 Colbert, J. E. Wallace 4 18

Completed 5
Production 40
Dry 1
Gas 1
Gas production 1,000,000

STEPHENS COUNTY

2-2s-8w George Pace et al 1 ..... dry
11-2s-8w Parker, McAllister et al 1-A.. dry
28-2s-7w Wilson, Donald Bros. 2 ..... dry
28-2s-7w McDonald, George Pace 1-B.. 50

Completed 4
Production 50
Dry 3

TULSA COUNTY

23-18-14 Horn, Boyd et al 8 50
24-18-14 Horn, J. B. Ash et al 1-A 10
5-17-14 Hodge, H. W. Bowder 2 30
6-16-13 Cowles, S. W. Anthony 1-A ... gas

Completed 4
Production 90
Gas 1
Gas production 2,500,000

WAGONER COUNTY

35-18-15 Lovett, Mays Drlg. Co. 1 ..... dry
2-17-15 Tiger, G. E. Cahill 1 50
2-17-15 Atkins, McIntire et al 1 ..... dry
23-18-15 Robin, Sands Pet. 3 75
26-18-15 Snake, Marrs et al 4 59
2-17-15 Tiger, McIntire 2 120
35-18-15 Lovett, B. G. Goble 1 100

Completed 7
Production 395
Dry 2

CARTER COUNTY

8-2s-2w Westheimer, Skelly Oil 1 77
3-1s-3w Perkins, Carter Oil 1 500
25-1s-3w Hopson, Samedan Oil 3 1170
25-1s-3w German, Samedan Oil 1-A.... 30

Wells completed 4
Production 1777

CREEK COUNTY

8-18- 7 Brown, Comal Oil 3 120
3-17- 8 Casey, J. E. Crosbie, Inc. 1 ... 75
36-17-11 Cruel, Sherry & Murta 2 60
33-17-12 Riley, Gilpin et al 1-A ..... dry
20-15- 9 Smith, Riverland Oil 1-A ..... dry
3-19- 8 Crossley, Samples & Mann 1-A dry
1-19- 9 Carolina, Johnson O. & R. 2 .. 87
28-17- 9 Hale, Carter Oil 1 ..... dry
19-19-10 Davis, Johnson O. & R. 3 114
26-18- 8 Wills, L. B. Jackson 5 275
27-18- 8 Richards, Merritt et al 6 75
34-18- 8 Tiger, F. O. Akin et al 3 125
31-17-12 Cruel, Merkle & Frame 1 .... dry
19-15-10 Barnett, Dickerson et al 1 ... dry

Wells completed 14
Production 931
Dry 6
Gas production 1,000,000

POTTAWATOMIE COUNTY

21-7-4 Brister, Hilton Phillipa 2 300
32-7-4 Terry, Amerada Pet. 1 1185
21-7-4 Banta, Stewart & Clarke 1 250
33-7-4 Brandenburg, Mid-Cont. Pet. 1.. 490
33-7-4 Lowther, Vaughn et al 1 1012
35-8-4 Brandenburg, Sunbeam Oil 1 132
32-7-4 Richardson, Deep Rock Oil 1 ... 175
2-8-5 Coker, Gypsy Oil 2 294
5-6-4 Hamm, Superior Oil 1 325
2-8-5 Swarb, W. D. Grisso 1 ..... dry

Wells completed 10
Production 4163
Dry 1

HUGHES COUNTY

4-8-8 Shepard, Donley et al 1-B ..... abd

COMANCHE COUNTY

3-3n-19w Hallum, Cooper et al 5 ..... dry

KIOWA COUNTY

27-7-20w King, King & Morse 1 ..... gas

Wells completed 1
Gas 1
Gas production 2,000,000

JEFFERSON COUNTY

3-7s-5w Seay, Southern Oil 5 50

MARSHALL COUNTY

Dilley, Neff et al 3 ..... dry

TILLMAN COUNTY

26-4s-15w Pitcher, Gypsy Oil 1 ..... dry

MUSKOGEE COUNTY

14-16-15 Smith, Ladd et al 2 ..... dry

LOGAN COUNTY

11-16-4w Faulkner, Shell Pet. 1 ..... dry

ATOKA COUNTY

2-4s-10e Stewart, Stewart et al 1 ..... dry

PAWNEE COUNTY

18-20-9 Rea, Schell & Scales 1 ..... dry

LINCOLN COUNTY

2-14-3 Wagner, Magnolia Pet. 1 1330

Kansas Fields

Summary of Wells Completed

	Comp.	Prod.	Dry	Gas
Cowley	4	1,325	2	0
Kingman	2	618	0	0
Ellsworth	3	825	1	0
Marion	1	0	1	0
Sumner	1	0	1	0
Reno	1	0	1	0
Greenwood	8	295	2	1
Sedgwick	2	1,700	0	0
Woodson	1	0	1	0
Norton	1	0	1	0
Elk	1	20	0	0
Harvey	15	10,479	3	0
McPherson	9	1,743	0	0
Rice	8	6,853	0	0
Barton	2	1,093	0	0
Total September	59	24,951	13	1
Total August	33	11,145	5	2
Difference	26	13,806	8	1

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Greenwood	0	9	9
Butler	0	1	1
Sedgwick	2	2	4
Cowley	0	1	1
McPherson	6	32	38
Harvey	7	24	31
Rice	8	16	24
Ellsworth	1	3	4
Barton	0	2	2
Russell	0	2	2
Ellis	0	1	1
Edwards	1	0	1
Finney	1	0	1
Kingman	2	2	4
Pratt	0	1	1
Reno	3	7	10
Rooks	1	0	1
Stafford	1	0	1
Trego	0	1	1
Total September	33	104	137
Total August	40	122	162
Difference	7	18	25

WELLS COMPLETED

COWLEY COUNTY

2-32-4 Bowman, Armer et al 1 ..... dry
12-32-4 Smiley, Roth & Faurot 2 125
13-30-8 Burge, Hart & Croft 1 ..... dry
22-32-4 Dibbens, Sinclair Prairie 6... 1225

Completed 4
Production 1325
Dry 2

KINGMAN COUNTY

30-27-10w Miles, Skelly Oil 1 318
30-27-10w Ratcliffe, Skelly Oil 1 300

Completed 2
Production 618

ELLSWORTH COUNTY

26-16-10w Wamhoff, Aylward & Barnsdall Oil 1 ..... dry
Stoltenberg, Derby Oil 2 650
22-16-10w Stoltenberg, Gypsy-Stanolind 1 175

Completed 3
Production 825
Dry 1 1

MARION COUNTY

6-17-3 Miller, Hutchinson O. & G. 1 dry

SUMNER COUNTY

26-33-1e Thompkins, Deal 1 ..... dry

RENO COUNTY

27-23-4w Querfield, Olson & Shell Pet. 1 dry

GREENWOOD COUNTY

15-25-13 Kaub, Wolf Creek Oil 1 100
22-22-13 Funkhouser, El-Bar Oil 1 ... dry
22-22-13 Young, Derby Oil 7 10
5-25-13 Gilroy, Mendenhall's 3 ..... gas
33-23-8 Farah, Maralyn Oil 1 ..... dry
24-25-13 Mills, C. Sheedy 5 100
6-24-12 Smith, Markus et al 50
14-25-13 Barriard, Sheedy et al 2 35

Completed 8
Production 295
Dry 3
Gas 1
Gas production 600,000

SEDGWICK COUNTY

15-26-2e Lygrisse, Shell Pet. 7-A (12 hrs.) 835
15-26-2e Fisher, Shell Pet. 8 865

Completed 2
Production 1700

WOODSON COUNTY

9-25-14 Munson, F. Fields 1 ..... dry

NORTON COUNTY

24- 2-22w Moody & Seagraves 1 ..... abd

ELK COUNTY

22-29-9 Jackson, Clay Pet. 1 20

HARVEY COUNTY

17-22-3w Schmidt, Derby O. & H. 3 ... 768
8-22-3w Nikkell, Shell Pet. 1 330
8-22-3w Nikkell, Shell Pet. 3 270
8-22-3w Andrees, Texas Co. 2 2500
17-22-3w Martens, P. & R. Corp. 4 960
19-22-3w Martens, Skelly Oil 4 506
4-22-3w Wall, Lario O. & G. 1 ..... dry
17-22-3w Schmidt, Skelly-Selby 4 100
19-22-3w Edwards, Mid-Kansas O. & G. 1 ..... dry
30-22-3w Schmidt, W. C. McBride, Inc., 4 385
19-22-3w Martens, Frost, Study et al 1 . 900
19-22-3w Ediger, Sinclair Prairie 3 ...1800
19-22-3w Ediger, Sinclair Prairie 4 ...1000
35-22-2w Lehman, Ima O. & G. 2 ..... dry

Completed 15
Production 10,479
Dry 3

McPHERSON COUNTY

11-19-2w Fleming, McPherson O. & G. 3 300
20-19-1w Lacquemont, Derby & Sinclair 3 177
12-20-2w Munn, Texas Co. 5 150
25-19-2w Wiles, Phillips & Shell 2 162
2-20-3w Tipton, Continental Oil 1 130
24-19-2w Miller, Lario O. & G. 4 300
26-19-2w Eaton, Youker et al 4 200
29-19-1w Garrett, Mid-Kansas O. & G... 180
30-19-1w Garrett, Shell-Phillips Pet. 3. 144

Completed 9
Production 1748

RICE COUNTY

31-19-9w Cemetery, Robertson & Hinkle 1 800
31-19-9w Munroe, Derby Oil 1 1200
31-19-9w Hedges, Ramsey et al 1 1848
32-19-9w City Park, Ramsey et al 1 ... 300
16-19-9w Sherman, National Ref. 2 370
16-20-10w Specht, Palmer et al 1 410
31-19-9w Burden, Gypsy Oil 1 1200
32-19-9w McGlynn, Gypsy Oil 1 725

Completed 8
Production 6855

BARTON COUNTY

9-20-11w Gerlof, Stanolind O. & G. 1 (14 hrs.) 168
16-20-11w Hauser, Stanolind O. & G. 1 (21 hrs.) 925

Completed 2
Production 1093

West Texas Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas
Ector	2	669	0	0
Howard	4	461	0	0
Pecos	3	437	1	0
Jones	3	7	2	0
Reagan	4	2,779	0	0
Ward	11	1,054	0	1
Total Sept.	27	5,407	3	1
Total Aug.	23	3,748	6	1
Difference	4	1,659	3	0

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drg.	Ttl.
Brewster	0	1	0	1
Concho	0	1	0	1
Crane	0	0	1	1
Crockett	0	1	0	1

Dawson	0	1	0	1
Ector	1	1	3	5
Fisher	2	1	6	9
Glasscock	1	1	0	1
Howard	5	5	6	16
Irion	0	2	3	5
Jones	0	1	2	3
Loving	0	1	2	3
Pecos	4	4	13	21
Reagan	1	0	4	5
Reeves	0	0	1	1
Runnels	1	1	3	5
Scurry	0	4	0	4
Terrell	0	2	0	2
Upton	0	0	1	1
Ward	6	5	11	22
Winkler	1	2	4	7
Total Sept.	21	34	60	115
Total Aug.	16	43	54	113
Difference	5	9	6	2

WELLS COMPLETED

ECTOR COUNTY

Stanolind Oil & Gas Co.'s No. 3 J. M. Cowden 624
Landreth Prod. Co. and Texas Co.'s No. 1 Holt 45

Wells completed 2
Initial production 669

HOWARD COUNTY

M. D. Bryant et al's No. 1 Denman 100
American Maracaibo Oil Co.'s No. 5-A Settles 63
Continental Oil Co.'s No. 2 Overton (old well drilled deeper) 253
Sinclair Prairie Oil Co.'s No. 7 Dodge 45

Wells completed 4
Initial production 461

PECOS COUNTY

Kimberlin et al's No. 1 Gregg 35
Culberson Bros.' No. 14 B. Monroe ..... abd
Mid-Kansas Oil & Gas Co.'s No. 20 Smith-Taylor 402

Wells completed 3
Initial production 437
Abandoned 1

JONES COUNTY

Moutray Oil Co.'s No. 1 M. Ray ..... abd
Roesner & Pendleton's No. 1 Minter ..... abd
T. M. Smart et al's No. 1 Reynolds 7

Wells completed 3
Initial production 7
Abandoned 2

REAGAN COUNTY

G. R. Snyder's No. 1 Hughes ..... abd
Big Lake Oil Co.'s No. 10-C University 1254
Big Lake Oil Co.'s No. 11-C University 1025
Continental Oil Co.'s No. 8-B University 500

Wells completed 4
Initial production 2779
Abandoned 1

WARD COUNTY

Abell Bros.' No. 1-B Sloan 277
Atlantic Oil & Prod. Co.'s No. 3 Johnson 20
S. A. Thompson's No. 3 W. D. Johnson 324
Eastland Oil Co.'s No. 1 Johnson 7
Gulf Prod. Co.'s No. 34 O'Brien 24
Messenger-Wadsworth's No. 1 Hard-Wilson (recompleted) 20
Sturm and Simms Oil Co.'s No. 1 Jones (drilled deeper) 20
Abell Bros. et al's No. 1 S. S. Owen et al 277
Abell Bros.' No. 1 F. G. Smith 65
A. Bradford's No. 1 B. Carson ..... gas
Colonial Oil Co.'s No. 1 W. F. Scarborough 40

Wells completed 11
Initial production 1054
Gas 1

Panhandle Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas
Gray	8	1,348	0	0
Hutchinson	2	783	0	0
Moore	1	0	0	1
Wheeler	3	466	0	0
Total Sept.	14	2,597	0	1
Total Aug.	15	2,560	0	2
Difference	1	37	0	1

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drg.	Ttl.
Carson	1	0	2	3
Childress	1	2	0	3
Gray	7	5	11	23
Hutchinson	3	2	6	11
Hemphill	0	1	0	1
Moore	0	1	3	4
Oldham	0	1	0	1
Roberts	0	1	0	1
Wheeler	0	1	6	7
Total Sept.	12	14	28	54
Total Aug.	14	12	32	51
Difference	2	2	6	3

WELLS COMPLETED

HUTCHINSON COUNTY

Huber Pet. Co.'s No. 2 Johnson 569
Stanolind Oil & Gas Co.'s No. 4 Ware 214

Wells completed 2
Initial production 783

MOORE COUNTY

Canadian Gas Co.'s No. 2 Perkins ..... gas

Wells completed 1
Gas 1

GRAY COUNTY

Bell Oil & Gas Co.'s No. 1 Webb 135
British American Oil Co.'s No. 4 Phillips 230
Danciger Oil & Ref. Co.'s No. 10 Powell-Brown 78
Skelly Oil Co.'s No. 4 Vulcans 300
The Texas Co.'s No. 6 Combs-Worley 100
Wilcox Oil & Gas Co.'s No. 23 Combs-Worley 335
Operators Ref. Co.'s No. 1 Sackett (old well drilled deeper) 150
Phillips Pet. Co.'s No. 8 Jackson 20

Wells completed 8
Initial production 1348

WHEELER COUNTY

Mid-Kansas Oil & Gas Co.'s No. 1 Huselby 157
Skelly Oil Co.'s No. 1 Huselby 396
Elbar Corp.'s No. 1 Noel 3

Wells completed 3
Initial production 466

East Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Bowie	1	0	1	0
Gregg	173	11,612	0	0
Henderson	1	0	1	0
Limestone	1	0	1	0
Navarro	1	0	1	0
Rusk	132	7,839	1	0
Smith	17	962	0	0
Upshur	15	883	0	0
Van Zandt	2	0	2	0
Ttotal September	343	21,296	7	0
Total August	200	12,859	6	0
Difference	143	8,437	1	0

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drlg.	Ttl.
Anderson	1	0	1	2
Angelina	0	2	0	2
Bowie	0	1	0	1
Delta	0	1	0	1
Fannin	0	1	0	1
Franklin	0	1	0	1
Freestone	0	1	0	1
Gregg	25	12	65	102
Henderson	1	1	1	3
Hill	1	0	0	1
Hopkins	0	1	0	1
Hunt	0	1	0	1
Kaufman	0	2	0	2
Leon	0	0	2	2
Limestone	1	0	0	1
Morris	1	2	1	4
Red River	0	1	1	2
Rusk	28	13	45	86
Smith	7	5	13	25
Titus	0	1	0	1
Upshur	8	7	15	30
Van Zandt	2	9	2	13
Wood	0	1	0	1
Total September	75	63	146	284
Total August	63	56	113	232
Difference	12	7	33	52

WELLS COMPLETED

BOWIE COUNTY

Lee Timberlake's No. 2 Tidwell ..... abd

Wells completed 1
Abandoned 1

GREGG COUNTY

Arkansas Fuel Oil Co.'s No. 19 Burnside, through tubing, ½ hr. 58
Arkansas Fuel Oil Co.'s No. 20 Burnside, open tubing 117
Atlantic Oil Prod. Co.'s No. 5 Barton, open tubing 85
Atlantic Oil Prod. Co.'s No. 21-A Burnside, open tubing 82
Atlantic Oil Prod. Co.'s No. 3 Foster, open tubing 85
Atlantic Oil Prod. Co.'s No. 46 Judge, open tubing 81
Atlantic Oil Prod. Co.'s No. 53 Judge, open tubing 89
Atlantic Oil Prod. Co.'s No. 54 Judge, open tubing 79
Atlantic Oil Prod. Co.'s No. 55 Judge, open tubing 81
Atlantic Oil Prod. Co.'s No. 56 Judge, open tubing 86
Atlantic Oil Prod. Co.'s No. 9 T. W. Lee, open tubing 82
Atlantic Oil Prod. Co.'s No. 9 Fishburn, open tubing 82
Atlantic Oil Prod. Co. and Sun Oil Co.'s No. 35 Hays, open tubing 86
Atlantic Oil Prod. Co. et al's No. 40 Hays, open tubing 80
Atlantic Oil Prod. Co. et al's No. 43 Hays, open tubing 86
Gulf Prod. Co.'s No. 44 Judge, open tubing 60
Heyser & Heard's No. 4 L. G. Tuttle, open tubing 100
Humble Oil & Ref. Co.'s No. 14 Harris, open tubing, ¼ hr. 16
Humble Oil & Ref. Co.'s No. 22 W. R. Hughes, ¾-in. tubing 64
Lesh & McCall's No. 5 M. Young, open tubing 100
Sells Pet. Co.'s No. 6 Fisher, open tubing 85
Snowden & McSweeney's No. 8 M. Bonner, open tubing 90
Stanolind Oil & Gas Co. et al's No. 8 J. W. Akin, tubing 21
Sun Oil Co.'s No. 9 Satterwhite, tubing choke, ¼ hr. 12
A. W. Tarrant's No. 1 Sabine River, 40 min. 50
Yount Lee Oil Co.'s No. 3 A. A. Castleberry, swabbing 12
Dearing & McBride's No. 2 Dixon, tubing 30
Gulf Prod. Co.'s No. 6 S. G. Andrews, tubing 72
Humble Oil & Ref. Co.'s No. 12 J. A. Knowles, open tubing 45
Island Oil Co.'s No. 3 J. A. Knowles, open tubing 70
Magnolia Pet. Co.'s No. 7 Cole, open tubing 80
Rhoads Drlg. Co.'s No. 20 Sabine River, open tubing, ½ hr. 50
J. B. Sowell's No. 6 Luce, open tubing 75
The Texas Co.'s No. 19 M. T. Cole, open tubing 80
The Texas Co.'s No. 12 H. T. Elder, open tubing 79
U-Tex Oil Co.'s No. 6 M. T. Cole, open tubing, ½ hr. 60
Wolfe and Marine Prod. Co.'s No. 5 M. T. Cole, ¼ hr. 45
Atlantic Oil Prod. Co.'s No. 48 Judge, open tubing 75
Atlantic Oil Prod. Co.'s No. 49 Judge, open tubing 75
Atlantic Oil Prod. Co. et al's No. 6-B Barnswell, open tubing 75
Atlantic Oil Prod. Co. et al's No. 36 Hays, open tubing 75
Bristow & Wynn's No. 5 Moore, open tubing 90
Joe Edgar's No. 2 Todd Stinchcomb, open tubing 75
F. H. E. Oil Co.'s No. 2 Clements, open tubing 98
Foundation Oil Co.'s No. 4 L. Willis, open tubing 95
Goodwin et al's No. 3 Johnson, open tubing 75
Gregg Oil Co.'s No. 1-H T.&P. Railroad, open tubing 75
Gulf Prod. Co.'s No. 40 J. C. Judge, open tubing 70
Heyser & Heard's No. 7 Hindman, open tubing 90
Ed Holman's No. 1 J. E. Turner, open tubing 75
Houston Oil Co.'s No. 4 E. W. Clements, open tubing 75
Kewanee Oil & Gas Co.'s No. 15 fee, open tubing, ¼ hr. 20
Jewel Kimberlin et al's No. 1 Block, open tubing 70
Leckner & Hubbard's No. 2-A A. Harley, open tubing 85
Joe Long Drlg. Co.'s No. 2-A W. W. Owens, open tubing 75
Magnolia Pet. Co.'s No. 5 C. Jones, open tubing 84
Magnolia Pet. Co.'s No. 5 Nicholson, open tubing 75
Magnolia Pet. Co.'s No. 11 O. F. Smith, open tubing 80
New Process Oil Co.'s No. 5 George Anderson, open tubing 70
W. L. Pickens (receiver) No. 3 Hoyt, open tubing 90
Roeser & Pendleton's No. 7-A Satterwhite, open tubing 60
Rhoads Drlg. Co.'s No. 6 Sabine River, open tubing, ½ hr. 30
Sinclair Prairie Oil Co.'s No. 36 M. T. Cole, through tubing, ¼ hr. 25
Sun Oil Co.'s No. 8 Joe Rollins, open tubing 51
The Texas Co.'s No. 4 Radford, open tubing 62
Tide Water Oil Co.'s No. 10 M. H. Bivens, open tubing, 10 min. 17
Tide Water Oil Co.'s No. 18 M. H. Bivens, open tubing, 5 min. 7
Tide Water Oil Co.'s No. 21 M. B. Hughey, open tubing, 10 min. 13
Tide Water Oil Co.'s No. 22 M. B. Hughey, open tubing, 10 min. 13
Utex Oil Co.'s No. 4 M. T. Cole, open tubing 75
Wheelock & Collins' No. 7 Clayton heirs, open tubing 68
Atlantic Oil Prod. Co.'s No. 45 Judge, open tubing 75
Atlantic Oil Prod. Co.'s No. 44 Moore, open tubing 85
Atlantic Oil Prod. Co.'s No. 10 Prichard, open tubing 80
Blake & Bradley's No. 1 Foshee estate, open tubing 75
Cranfill & Reynolds' No. 8 Rembert, open tubing 75
East Texas Oil & Ref. Co.'s No. 9 Hindman, open tubing, ½ hr. 68
East Texas Oil & Ref. Co.'s No. 10 F. White, open tubing, ½ hr. 64
East Texas Oil & Ref. Co.'s No. 11 F. White, open tubing 64
Fain & McGaha's No. 8 A. Tooke, open tubing 75
Gulf Prod. Co.'s No. 43 Judge, open tubing 80
Hawkeye Pet. Co.'s No. 2 H. Bonner, open tubing 80
Humble Oil & Ref. Co.'s No. 6 C. C. Clements, ¾-in. tubing 40
Humble Oil & Ref. Co.'s No. 15 W. W. Holland, ¼ hr. 18
Leckner & Hubbard's No. 3 Doby, open tubing, 20 min. 40
Nicholson-Terrell Oil Corp.'s No. 2 Nicholson, open tubing 110
Roeser & Pendleton's No. 7-A Nicholson, pumping, per day 8
Shano Oil Co.'s No. 4 Hopkins, open tubing 75
Shasta Oil Co.'s No. 3-B G. W. Richey, open tubing 75
Staley & Winn's No. 3 T. Snoddy, open tubing 75
Stanolind et al's No. 6 J. W. Akin, open tubing 79
The Texas Co.'s No. 16 T. W. Lee, open tubing 95
Tide Water Oil Co.'s No. 6 Fisher, open tubing, 10 min. 11
Tide Water Oil Co.'s No. 8 B. Moore, open tubing, 10 min. 12
Paul G. Brown's No. 3 G. W. Ritchie, open tubing 60
Atlantic Oil Prod. Co.'s No. 11 Anirews, open tubing 85
Gulf Prod. Co.'s No. 23 Spear, open tubing 72
Island Oil Co.'s No. 2 W. Williams, open tubing 65
Rhoads Drlg. Co.'s No. 12 Sabine River, open tubing, ½ hr. 100
Shell Pet. Corp.'s No. 14-A B. F. Laird, tapered tubing, ½ hr. 23
R. B. Shults' No. 1 M. Simmons, open tubing 80
Sinclair Prairie Oil Co.'s No. 37 M. T. Cole, open tubing, ½ hr. 45
Sinclair Prairie Oil Co.'s No. 31-B A. A. King, open tubing, ½ hr. 30
Sinclair Prairie Oil Co.'s No. 4 A. A. King, open tubing, ¼ hr. 30
J. B. Sowell's No. 5 W. P. Luce, open tubing 60
S. K. Vierson et al's No. 6 G. E. Muckelroy, open tubing 120
Vise et al's No. 1-C Cumi Wells, open tubing, ½ hr. 62
Wolf and Marine Prod. Co.'s No. 4 M. T. Cole, open tubing 110
Amerada Pet. Co.'s No. 7 Bumpass, open tubing 69
Arkansas Fuel Oil Co.'s No. 11 W. T. Burnside, 1-in. tubing, ½ hr. 53
Arkansas Fuel Oil Co.'s No. 12 Burnside, 1-in. tubing, ½ hr. 60
Atlantic Oil Prod. Co.'s No. 15 Duncan, open tubing 80
Atlantic Oil Prod. Co.'s No. 47 Judge, open tubing 85
Atlantic Oil Prod. Co.'s No. 50 Judge, open tubing 77
Atlantic Oil Prod. Co.'s No. 51 Judge, open tubing 85
East Texas Oil & Ref. Co.'s No. 10 Hindman, open tubing, ½ hr. 60
Faith Oil Co.'s No. 2 Weneker, open tubing, ½ hr. 20
Fleming & Kemble's No. 6 J. Barnes, open tubing 75
Gregg Oil Co.'s No. 1-J T.&P. Railroad, open tubing 95
Heyser & Heard's No. 8 Hindman, open tubing 75
Heyser & Heard's No. 3 L. V. Tuttle, open tubing 75
Howard Pet. Co.'s No. 4 Stuckey-Thrasher, open tubing 75
Humble Oil & Ref. Co.'s No. 7 C. C. Clements, ¾-in. tubing 49
Magnolia Pet. Co.'s No. 13 Brawley, open tubing 110
Magnolia Pet. Co.'s No. 12 W. E. Jones, open tubing 190
Sabinas Oil Co.'s No. 3-A Falvey, open tubing 90
Selby Oil & Gas Co.'s No. 18-B Snavely heirs, open tubing 75
Snowden & McSweeney's No. 5 M. Bonner, open tubing 90
Stanolind and Simms' No. 8 P. McGeorge, 2-in. tubing, 65 min. 51
Sun Oil Co.'s No. 8 M. Thomas, open tubing, ¼ hr. 21
Tide Water Oil Co.'s No. 23 Lake Devernia, open tubing 75
Tide Water Oil Co.'s No. 7 B. Moore, open tubing, 10 min. 16
Finley and Dycke Oil Co.'s No. 3 G. H. Blackman, open tubing, ½ hr. 39
Hiram Reed's No. 3 R. Lacy, open tubing 85
Rhoads Drlg. Co.'s No. 5 Sabine River, open tubing, ½ hr. 50
Rhoads Drlg. Co.'s No. 13 Sabine River, open tubing, ½ hr. 50
Shultz (receiver), No. 1 Tom Bell, open tubing, 2 hrs. 100
Sun Oil Co.'s No. 7 Rollins, open tubing 65
The Texas Co.'s No. 8 R. B. Wall, open tubing 80
Tide Water Oil Co.'s No. 9 M. B. Hughey, open tubing, 10 min. 10
Tide Water Oil Co.'s No. 10 C. J. Strong, open tubing, 10 min. 8
Wheelock & Collins' No. 8 Clayton, open tubing 75
A. P. Carr's No. 4 G. W. Ritchie, open tubing 78
Cranfill & Reynolds' No. 7 Rember, open tubing 75
East Texas Oil & Ref. Co.'s No. 11 Hindman-Guy, open tubing 90
East Texas Oil & Ref. Co.'s No. 3 D. G. Sparks, open tubing, 24 hrs. 200
East Texas Oil & Ref. Co.'s No. 3 F. White, open tubing, 20 min. 48
Fain & McGaha's No. 9 A. Tooke, open tubing 90
Humble Oil & Ref. Co.'s No. 10 J. F. Boles, open tubing, ¾-in. tubing choke 47
Humble Oil & Ref. Co.'s No. 8 A. Carter, open tubing, ¼ hr. 16
Humble Oil & Ref. Co.'s No. 13 Harris, ¾-in. tubing 62
Iowa-Payne Oil Co.'s No. 2 Isley, open tubing, 35 min. 160
Leckner & Hubbard's No. 2 Doby, open tubing 75
Payne et al's No. 1 Swain Holcomb, open tubing 75
Rowan & Nichols' No. 4-B Todd, open tubing 75
Sinclair Prairie Oil Co.'s No. 11 Mary Lawson, open tubing, ½ hr. 47
A. L. Slaughter's No. 1 R. B. White, open tubing 70
Stanolind Oil & Gas Co.'s No. 6 G. F. Meadows, open tubing, 35 min. 41
Sun Oil Co.'s No. 15 Hayes, open tubing, ¼ hr. 35
Superior Oil Co.'s No. 15-A Pritchard, open tubing, ¼ hr. 38
Tide Water Oil Co.'s No. 9 B. Moore, open tubing, 10 min. 15
Tysco Oil Co.'s No. 4 Finley and Thomas, open tubing, ¼ hr. 25
S. G. Gury and T. Badgett's No. 2 A. A. King, open tubing, ¼ hr. 30
Clover Leaf Oil Co.'s No. 1-C S. Carr, open tubing 86
Invincible Oil Co.'s No. 9 Weiss, open tubing, 5 hrs. 475
I-Tex Oil Co.'s No. 2 J. A. Knowles, open tubing 75
John Mabee's No. 9 M. T. Cole, open tubing, ½ hr. 79
Rhoads Drlg. Co.'s No. 26 Sabine River, open tubing, ½ hr. 50
Shell Pet. Corp.'s No. 30 J. B. Watson, tapered tubing, ½ hr. 32
Shell Pet. Corp.'s No. 31 J. B. Watson, open tubing, ½ hr. 37
Stanolind Oil & Gas Co.'s No. 5 Clayton, open tubing, 40 min. 51
Sun Oil Co.'s No. 9 A. S. Morton, per day pumping 25
Tide Water Oil Co.'s No. 23 M. B. Hughey, open tubing, 10 min. 10

Wells completed 173
Initial production 11,612

HENDERSON COUNTY

Laco Oil Co.'s No. 1 John Morton ..... abd

Wells completed 1
Abandoned 1

LIMESTONE COUNTY

Lone Star Gas Co.'s No. 1 B. B. Bean.. abd

Wells completed 1
Abandoned 1

NAVARRO COUNTY

Siam Oil Co.'s No. 1 J. K. Kleipp ..... abd

Wells completed 1
Abandoned 1

RUSK COUNTY

East Texas Oil & Ref. Co.'s No. 6 East Andy Givens, open tubing, ¼ hr. 20
Gulf Prod. Co.'s No. 9 J. T. Sexton, open tubing 30
Houston Oil Co.'s No. 7 S. S. Laird, open tubing, ½ hr. 35
Stanolind Oil & Gas Co.'s No. 7 J. S. Powers, 1-in. tubing, ½ hr. 49
Tatum et al's No. 1 Brightwell, open tubing, ½ hr. 72
Anderson's No. 1 Daisy Bradford, 10 hrs. pumping 20
Tress Oil Corp.'s No. 1-B L. Tolliver, open tubing 65
East Texas Oil & Ref. Co.'s No. 4 Giles, open tubing, ¼ hr. 25
East Texas Oil & Ref. Co.'s No. 3 J. B. Wilson, open tubing, ¼ hr. 35
Gulf Prod. Co.'s No. 1 W. B. Perry, ¾-in. tubing choke, 45 min. 20
Humble Oil & Ref. Co.'s No. 17 J. W. Turner, open tubing 60
Humble Oil & Ref. Co.'s No. 9-A V. Turner, open tubing 75
H. L. Hunt Prod. Co.'s No. 7 V. E. Reed, pumping 57 min. 20
J. E. Mabee's No. 3 S. Stone, open tubing 73
Mid-Kansas Oil & Gas Co.'s No. 51 M. M. Cross, open tubing 80
Mid-Kansas Oil & Gas Co.'s No. 43 Grissom, open tubing 86
Mid-Kansas Oil & Gas Co.'s No. 3 R. Van Zandt, open tubing 86
S. R. McDonald Bros.' No. 2-B Cora Hannah, open tubing 40
Smith and Sikes' No. 2 W. H. Frederick, pumping 5 hrs. 20
Sun Oil Co.'s No. 4 R. G. Mason, open tubing 37
Ward Oil Co.'s No. 7 Giles, open tubing 73
Woodley Pet. Co.'s No. 3 M. M. McMillan, open tubing 40
Cordovan Union Oil & Gas Co.'s No. 1-D C. O. Christian 20
East Texas Oil & Ref. Co.'s No. 3 J. Robinson, ½ hr. 33
Gillum et al's No. 4 Brightwell, open tubing 85
Gulf Prod. Co.'s No. 4-A H. Sexton, open tubing 30
Humble Oil & Ref. Co.'s No. 62 L. D. Crim, open tubing 90
Humble Oil & Ref. Co.'s No. 32-A S. S. Laird, ¾-in. tubing 49
Olsen Bros. and Johnson's No. 8 J. S. Powers, open tubing, ½ hr. 30
Sabine Syndicate's No. 4 George Thompson, open tubing 65
Tide Water Oil Co.'s No. 9 J. S. Bean, open tubing, 10 min. 10
Tide Water Oil Co.'s No. 5 Jernigan, open tubing, 10 min. 8
Sam K. Vierson's No. 3 Jernigan, open tubing 111
Weaver-Crim Corp.'s No. 1-C F. Bean, open tubing 110
Brawn (receiver), No. 1 Lide ..... abd
Combined Oil Interests' No. 16 G. W. Eaton, open tubing, ½ hr. 21
East Texas Oil & Ref. Co.'s No. 3 Howell, open tubing, ¼ hr. 22
East Texas Oil & Ref. Co.'s No. 5 O. H. Grissom, open tubing, ½ hr. 25
Falcon Oil Co.'s No. 11 T. O. Mason, open tubing 60
Humble Oil & Ref. Co.'s No. 27-A M. B. Kangerga 53
Humble Oil & Ref. Co.'s No. 10 H. A. Piercy 75
H. L. Hunt Prod. Co.'s No. 9 W. P. Moore, open tubing 85
Lion Oil & Ref. Co.'s No. 11-B Brooks, open tubing 60
Mid-Kansas Oil & Gas Co.'s No. 16 E. E. Moores, open tubing 60
Mid-Kansas Oil & Gas Co.'s No. 15 S. H. Moores, open tubing 108
The Texas Co.'s No. 11 Bank of Overton, open tubing 87
Tide Water Oil Co.'s No. 13 Pinkston, open tubing, ¼ hr. 16
Venable & McClanahan's No. 14 J. A. Birdwell, open tubing 75
Ajo Oil Co.'s No. 6 S. E. Sanders, open tubing 75
Barnsdall Oil Co.'s No. T. H. Gill, open tubing 80
East Texas Oil & Ref. Co.'s No. 5 West Andy Givens, open tubing, 45 min.... 87
East Texas Oil & Ref. Co.'s No. 10 D. Wills, open tubing, ¼ hr. 25
Humble Oil & Ref. Co.'s No. 6-B W. P. Moore, open tubing 75
P.&A. Oil Co.'s No. 1 Brightwell, open tubing 80
C. L. McMahon's No. 7 S. S. Laird, open tubing 86
J. M. Robert's No. 7 W. J. Brightwell, open tubing, 20 min. 40
Shell Pet. Corp.'s No. 13 W. P. Moore, tapered tubing, ½ hr. 28
Snowden & McSweeney's No. 12 Roy Laird, open tubing, ½ hr. 78
Stanolind Oil & Gas Co.'s No. 6 J. S. Powers, tubing choke, ½ hr. 53
Tide Water Oil Co.'s No. 3-B Buntyn, open tubing, ¼ hr. 27
American Liberty Oil Co.'s No. 8-A L. J. Pinkston, open tubing 75
Cullen Oil Co.'s No. 3-B Thrash, open tubing 55
East Shore Oil Co.'s No. 6 Fox, open tubing, ¼ hr. 25
East Texas Oil & Ref. Co.'s No. 5 Giles, open tubing, ¼ hr. 20
Griffin & Barnes' No. 1 fee, open tubing 25
H.B.W. Oil Co.'s No. 3 Redwine, per day pumping 75
Humble Oil & Ref. Co.'s No. 20 Blackwell, open tubing 75
Humble Oil & Ref. Co.'s No. 9-B Kangerga, open tubing 75
Humble Oil & Ref. Co.'s No. 10 Pilgreen, open tubing 75
Humble Oil & Ref. Co.'s No. 35-A R. E. L. Silvey, open tubing 75
Humble Oil & Ref. Co.'s No. 8-A V. Turner, open tubing 75
H. L. Hunt Prod. Co.'s No. 11-C R. W. Fair, open tubing 75
J. E. Mabee's No. 4 S. Stone, open tubing 75
Joe Marr Drlg. Co.'s No. 1 M. Lee, open tubing 50
M. Barney Cockburn's No. 2 A. Thrash, open tubing 75
Mid-Kansas Oil & Gas Co.'s No. 50 M. M. Cross, open tubing 88
Mid-Kansas Oil & Gas Co.'s No. 44 W. T. Grissom, open tubing 96
Mid-Kansas Oil & Gas Co.'s No. 2 Robert Van Zandt, 2-in. lead line 85
Olsen Bros.' No. 5 J. T. Brown, open tubing 75
Sun Oil Co.'s No. 3 Cooper, open tubing 44
Sutton & Hawkins, No. 1 Church Lot, open tubing 50
Tide Water Oil Co.'s No. 12 L. J. Pinkston, open tubing 65
Tide Water Oil Co.'s No. 6 Ras Pool, open tubing, ¼ hr. 16
Abercrombie & Harrison's No. 1-B Brightwell, open tubing 85
Gillam Oil Co.'s No. 3 Brightwell, open tubing 75
Houston Oil Co.'s No. 6 S. S. Laird, open tubing, ½ hr. 30
Humble Oil & Ref. Co.'s No. 70 L. D. Crim, ¾-in. tubing choke 97
Magnolia Pet. Co.'s No. 11 C. C. Still, open tubing 105
Shoreline Oil Co.'s No. 2 Brightwell, open tubing 60
Sam Skler's No. 2 C. E. Christian, open tubing 80
Tide Water Oil Co.'s No. 4 Jernigan, open tubing, ¼ hr. 27
Weaver and Crim Oil Co.'s No. 3-B Bean, open tubing 40
C. L. Archer, No. 3 J. H. Stewart, open tubing 80
Como Oil Co.'s No. 2 Daisy Bradford, open tubing 45
Humble Oil & Ref. Co.'s No. 30-A R. E. L. Silvey, ¾-in. tubing 59
Humble Oil & Ref. Co.'s No. 34-A R. E. L. Silvey, open tubing 64
Sinclair Prairie Oil Co.'s No. 39 I. L. Kinney, ¼ hr. 35
The Texas Co.'s No. 10 Bank of Overton, open tubing 80
The Texas Co.'s No. 3 Cora Hanna, open tubing 66
Venable and McClanahan's No. 13 J. A. Birdwell, open tubing, ¼ hr. 37
Atlantic Oil Prod. Co.'s No. 14 Brightwell, open tubing 75
Humble Oil & Ref. Co.'s No. 84 Crim, ¾-in. tubing choke 97
Humble Oil & Ref. Co.'s No. 85 L. D. Crim, open tubing 75
Humble Oil & Ref. Co.'s No. 15-A S. S. Laird, ¾-in. tubing choke 60
Humble Oil & Ref. Co.'s No. 16-B Sexton ..... No gauge
Luling Oil & Gas Co.'s No. 4-A W. M. Brightwell, ¾-in. tubing choke 65
C. L. McMahon's No. 8 Laird, open tubing, ½ hr. 20
Olsen Bros. and Johnson's No. 7 J. S. Powers, open tubing 75
Overton Ref. Co.'s No. 3 Morris, per day swabbing 20
Ajo Oil Co.'s No. 5 S. E. Sanders, open tubing 75
Bennett & Ryan's No. 2 M. Schuler, open tubing 75
East Texas Oil & Ref. Co.'s No. 4 Barksdale, open tubing, ¼ hr. 22
Falcon Oil Co.'s No. 10 T. O. Mason, open tubing, ¼ hr. 35
Humble Oil & Ref. Co.'s No. 18-A Blackwell, open tubing 96
Humble Oil & Ref. Co.'s No. 6 C. O. Blackwell, 2-in. tubing 114
Humble Oil & Ref. Co.'s No. 29-A M. & R. Kangerga, open tubing 76
Humble Oil & Ref. Co.'s No. 35-A Kangerga, open tubing 85
Humble Oil & Ref. Co.'s No. 11-B Kangerga, open tubing 84
Humble Oil & Ref. Co.'s No. 11 H. A. Piercy, open tubing 61
Humble Oil & Ref. Co.'s No. 23-A S. A. Tolwman, open tubing 75
Humble Oil & Ref. Co.'s No. 29 W. L. Price, open tubing 88
Humble Oil & Ref. Co.'s No. 13-A J. H. Silvey, open tubing 88
Humble Oil & Ref. Co.'s No. 31-A R. E. L. Silvey, open tubing 60
H. L. Hunt Prod. Co.'s No. 3-A Bradford, per day pumping 20
H. L. Hunt Prod. Co.'s No. 6 Thrash, open tubing 45
Mid-Kansas Oil & Gas Co.'s No. 16 S. H. Moores, open tubing 68
Mid-Kansas Oil & Gas Co.'s No. 3 Rollins, open tubing 70
Restal Drlg. Co.'s No. 6 J. T. Brown, open tubing 75
Houghton Corp.'s No. 2 W. E. Wiley, open tubing, ½ hr. 15
Stanolind Oil & Gas Co.'s No. 5-B. H. Schuler, open tubing, ½ hr. 27
The Texas Co.'s No. 6 J. W. Turner, open tubing 60
Venable & McClanahan's No. 15 J. A. Birdwell, open tubing 75

Wells completed 132
Initial production 7839
Abandoned 1

SMITH COUNTY

Manahan Oil Co.'s No. 2 S. S. Cook, open tubing 74
Hunt Prod. Co.'s No. 7-B R. W. Fair, open tubing 75
Jackson, Wise & Snowden's No. 4 S. S. Cook, open tubing 65
Sinclair Prairie Oil Co.'s No. 9-B A. S. Jarvis, ¼ hr. 35
Sutton & Huskin's No. 3 Cemetery, open tubing 75
Mid-Kansas Oil & Gas Co.'s No. 21 J. H. Sharp, through tubing 28
Bracken & Curtis' No. 1 T. O. Wright, open tubing 75
Jackson, Wise & Snowden's No. 3 S. S. Cook, open tubing 60
Magnolia Pet. Co.'s No. 15 Irion Wright, ¼ hr. through tubing 32
Sinclair Prairie Oil Co.'s No. 21-C A. J. Jarvis, through tubing, ½ hr. 35
Sinclair Prairie Oil Co.'s No. 5 Wiley, open tubing, ¼ hr. 28
Sinclair Prairie Oil Co.'s No. 13 D. Wright, open tubing, ¼ hr. 40
Barney Carter's No. 2 T. O. Wright, open tubing 75
Gant & Waggoner No. 4 T. Stone, open tubing 60
H. L. Hunt Prod. Co.'s No. 13-A R. W. Fair, open tubing 72
Alex McCutcheon's No. 3 A. S. Jarvis, open tubing 35
Mid-Kansas Oil & Gas Co.'s No. 22 J. H. Sharp, open tubing 98

Wells completed 17
Initial production 962

UPSHUR COUNTY

M. T. Flannigan's No. 2 H. F. Whitehurst, open tubing 90
Humble Oil & Ref. Co.'s No. 15 I. D. Smith, open tubing, ¼ hr. 32
Humble Oil & Ref. Co.'s No. 7 A. J. Watkins, ¾-in. tubing choke 33
Lester & Duffield's No. 5 Graves, open tubing 76
Magnolia Pet. Co.'s No. 9 M. V. Blackwell, open tubing 84
Magnolia Pet. Co.'s No. 1 G. Brooks, open tubing 60
Mudge Oil Co.'s No. 10-A Free, open tubing 75
Strouble & Stroube's No. 4 R. J. Mackey, open tubing 90
J. E. Watts' No. 1 Eva O'Byrne, open tubing 60
Humble Oil & Ref. Co.'s No. 7-B Eva O'Byrne, ¼ hr. 5
Humble Oil & Ref. Co.'s No. 7 J. Phillips, open tubing 50
Paul Pewitt's No. 2 A. J. Sanders, open tubing 80
Cranfill & Reynolds' No. 7 L. Graves, flowing by heads 13
Humble Oil & Ref. Co.'s No. 11 G. W. Johnson, open tubing 55
Mudge Oil Co.'s No. 11-A J. W. Free, open tubing 80

Wells completed 15
Initial production 883

VAN ZANDT COUNTY

Reasonover et al's No. 1 D. F. Cade ... abd
Van Oil Association's No. 1 Tankersley . abd

Wells completed 2
Abandoned 2

North Texas

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas
Archer	41	3,432	8	0
Brown	7	97	4	0
Callahan	3	0	3	0
Clay	2	125	1	0
Coleman	2	0	2	0
Eastland	2	0	2	0
Jack	6	138	4	1
Montague	3	156	2	0
Palo Pinto	5	0	4	1
Shackelford	9	320	1	0
Throckmorton	1	15	0	0
Wichita	8	73	3	0
Wilbarger	10	551	2	0
Wise	1	0	1	0
Total Sept.	109	4,907	37	2
Total Aug.	81	2,330	45	5
Difference	19	2,577	8	3

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drg.	Ttl.
Archer	16	7	30	53
Brown	1	1	6	8
Callahan	1	2	4	7
Clay	1	0	3	4
Coleman	1	1	4	6
Cooke	1	2	2	5
Eastland	0	1	3	4
Erath	0	1	0	1
Foard	1	0	1	2
Grayson	0	3	1	4
Jack	0	2	4	6
Johnson	0	2	0	2
Montague	0	0	1	1
Palo Pinto	2	3	5	10
Parker	0	3	0	3
Shackelford	6	3	8	17
Stephens	1	1	2	4
Taylor	2	1	3	6
Tarrant	0	2	0	2
Throckmorton	1	2	2	5
Wichita	1	1	5	7
Wilbarger	2	2	5	9
Wise	0	1	0	1
Young	4	5	30	39
Total Sept.	41	46	119	296
Total Aug.	43	53	88	184
Difference	2	7	31	20

WELLS COMPLETED

ARCHER COUNTY

King and Krohenbuhl's No. 1 Ray .... abd
A. Z. Kouri's No. 1 Montgomery 6
Jessie Lincoln's No. 4 Ray 10
W. B. Omohundro's No. 7 Turbeville.. abd
Panhandle Ref. Co.'s No. 1 Sheckill .. 395
Panhandle Ref. Co.'s No. 2 Sheckill... 15
Rathke Oil Co.'s No. 1 Hayter ..... abd
Wichita Prod. Co.'s No. 1 Andrews.... 10
Fain & McGaha's No. 3 Fain 40
Huggins Oil Co.'s No. 4 Parkey 30
Anderson et al's No. 4 Abercrombie... 12
Bridwell Oil Co.'s No. 1 Bridwell ..... abd
Bridwell Oil Co.'s No. 1 Falls 15
F. P. Cullum's No. 6 Fall-Ellis 70
F. P. Cullum's No. 9 Falls-Ellis 12
R. P. Dorian's No. 1 Andrews 6
W. B. Hamilton's No. 3 Abercrombie.. 75
W. B. Hamilton's No. 4 Abercrombie.. 250
W. B. Hamilton's No. 8 Abercrombie.. 75
W. B. Hamilton's No. 1 Ikard 150
W. B. Hamilton's No. 2 Ikard 500
King and Krahenbuhl's No. 1 Sheckill.. 200
Perkins and Cullum's No. 4 Falls-Hanszen 50
Petroleum Producers Co.'s No. 3 Richardson 50
S. V. White's No. 1 Portwood ..... abd
Fain & McGaha Oil Corp.'s No. 2 Fain & McGaha 125
Fain & McGaha Oil Corp.'s No. 5 Fain & McGaha 60
Fain & McGaha Oil Corp.'s No. 2 Jackson 25
A. Kriss' No. 3 Hughes ..... abd
E. J. Stump et al's No. 4 Wilson 184
The Texas Co.'s No. 1 Wilson ..... abd
Anderson et al's No. 3 Abercrombie.... 32
Bonner Oil Co.'s No. 7 Ray 95
L. T. Burns' No. 3 Jack 5
M. D. Goldsmith's No. 1 Beardon ..... abd
Jack Trace's No. 2 Andrews 15
W. B. Hamilton's No. 1 Coffield 200
W. B. Hamilton's No. 3 Ikard 487
W. B. Hamilton's No. 4 Ikard 85
W. B. Hamilton's No. 3 Pace 63
W. B. Hamilton's No. 4 Pace 85

Wells completed 41
Initial production 3432
Abandoned 8

BROWN COUNTY

D. R. Bailey et al's No. 1 W. B. Chambers ..... abd
S. B. Owens' No. 7 Lynch 10
Campbell & Cox's No. 1 R. A. Blair... 12
Charter Oil Co.'s No. 2 Reeves 75
Jameson-Pollard's No. 1 Johnson ..... abd
Stone & Garner's No. 1 T. M. Windham abd
W. G. Sawyer's No. 1 Bull ..... abd

Wells completed 7
Initial production 97
Abandoned 4

CALLAHAN COUNTY

C. B. Holmes' No. 1 Kelton ..... abd
Watson Drlg. Co.'s No. 12 Radford .... abd
Watson Drlg. Co.'s No. 13 Radford .... abd

Wells completed 3
Abandoned 3

CLAY COUNTY

The Texas Co.'s No. 1 George 125
Gay Hammond et al's No. 1 Meyers ... abd

Wells completed 2
Initial production 125
Abandoned 1

COLEMAN COUNTY

C. B. Welsh's No. 1 J. W. Brown .... abd
Don Dellon et al's No. 1 Aldridge ..... abd

Wells completed 2
Abandoned 2

EASTLAND COUNTY

Biel Morris' No. 1 S. R. Hunt ..... abd
Rowan Drlg. Co.'s No. 1 D. P. Neville abd

Wells completed 2
Abandoned 2

JACK COUNTY

McLaughlin's No. 1 Cantwell ..... abd
P. C. Meredith's No. 1 J. M. Ballon ... gas
LeRoy Slusher's No. 1 Rollins ..... abd
Brazos River Gas Co.'s No. 1 Tex-Clayton 138
B. O. Minnick's No. 1 Hanna ..... abd
Root Drlg. Co.'s No. 4 Coleman-Leach. abd

Wells completed 6
Initial production 138
Gas 1
Abandoned 4

MONTAGUE COUNTY

Bridwell Oil Co.'s No. 1 York ..... abd
Lesh & McCall's No. 1 Cunningham ... abd
Seitz, Comegys & Seitz's No. 1 Holt ... 156

Wells completed 3
Initial production 156
Abandoned 2

PALO PINTO COUNTY

Palo Pinto Oil Corp.'s No. 9 Strawn .. gas
O. P. Coffin's No. 1 W. H. Wright.... abd
T. B. Spence et al's No. 1 Wheeler .... abd
Britton & Gordon's No. 4 Strawn ..... abd
W. K. Gordon's No. 1 J. F. Butler .... abd

Wells completed 5
Gas 1
Abandoned 4

SHACKELFORD COUNTY

Roeser & Pendleton's No. 1 5-261 Morris Buie 125
W. F. Snebold et al's No. 1 Spears 12
Callahan & Beack's No. 5 E. A. Jeter.. 7
J. L. Douglas' No. 8 Carter 30
J. L. Douglas' No. 9 Carter 20
Jones et al's No. 6 Dodson 1
W. F. Snebold's No. 2 Spears 75
Union Oil & Mineral Co.'s No. 2 Carter 50
Union Oil Co.'s No. 3 Carter ..... abd

Wells completed 9
Initial production 320
Abandoned 1

THROCKMORTON COUNTY

J. H. Pearman's No. 2 Tutter 15

Wells completed 1
Initial production 15

WICHITA COUNTY

M. A. Hamilton's No. 1 McKinley ..... abd
R. R. Clark's No. 30 Beckley 40
Ted Cooper et al's No. 2 Waggoner Bros. 10
Ted Cooper et al's No. 3 Waggoner Bros. ..... abd
Talding & Cochran's No. 3 Waggoner Bros. (recompleted) 5
Ryan Pet. Co.'s No. 10 Nance ..... abd
Wm. Clark's No. 3 Overby 6
Wm. Clark's No. 4 Overby 12

Wells completed 8
Initial production 73
Abandoned 3

WILBARGER COUNTY
Ester Oil Co.'s No. 1 Waggoner ..... abd
Fain & McGaha's No. 1 Waggoner ..... abd
Phillips Pet. Co.'s No. 3 Waggoner 126
Phillips Pet. Co.'s No. 1 Waggoner 100
The Texas Co.'s No. 4 Waggoner 25
Waggoner Ref. Co.'s No. 2 Waggoner.. 15
Waggoner Ref. Co.'s No. 3 Waggoner.. 17
Waggoner Ref. Co.'s No. 1 Waggoner.. 46
Luther Webb's No. 2 Waggoner 198

Wells completed 10
Initial production 551
Abandoned 2

WISE COUNTY
R. T. Nail's No. 1 Coffman ..... abd

Wells completed 1
Abandoned 1

YOUNG COUNTY
Beavers et al's No. 2 Montgomery 90
Brazelton et al's No. 9 Taack..... abd
Petroleum Producers' No. 4 Belknap .. 100
W. F. Powell's No. 1 Casey ..... abd
H. Stine's No. 1 Burns ..... abd
Westheimer & Daube's No. 11 Larimore abd
Wheeler & Brashear's No. 2 Jefferey .. abd
White & Duncan's No. 1 Montgomery .. abd
Brazelton et al's No. 8 Taack ..... abd
F. E. Butler's No. 2 Jones ..... abd
Campbell et al's No. 4 Campbell 45
Deninger et al's No. 1 Stewart ..... abd
Deninger et al's No. 2 Stewart ..... abd
HY Oil Co.'s No. 10 Larimore 50
Hirshell Stine's No. 1 Rayburn ..... abd
Humble Oil & Ref. Co.'s No. 15 Mercer 10
Iron Mountain Oil Co.'s No. 1 Robinson 20
Iron Mountain Oil Co.'s No. 2 Robinson 13
Iron Mountain Oil Co.'s No. 21 Tatum . 30
Kimmell & Lee's No. 1 S. E. Black ... abd
Lowe Farm Oil Co.'s No. 7 Lowe 50
Panhandle Ref. Co.'s No. 1 Jebbs ..... abd
Petroleum Prod. Co.'s No. 4 Belknap .. 50
Sams & Watson's No. 5 Liftin 2
Snoddy & Sommers' No. 1 Jose ..... abd
Texas Plains Oil Co.'s No. 4 Jarvey ... 35
Wheeler & Brashear's No. 1 Jeffery ... 210
White & Duncan's No. 2 Smith 90
White & Duncan's No. 4 Smith 100
White & Duncan's No. 3 Smith ..... abd
White & Duncan's No. 5 Wolf 100
D. L. Wolf's No. 5 Wolf ..... abd

Wells completed 32
Initial production 976
Abandoned 16

Southwest Texas Fields

Summary of Field Operations

Pools—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Car- Tex	0	0	0	0	1	1	1
Cedar Creek	1	150	0	0	0	0	0
Chittam	1	0	1	0	0	2	2
Cuevitas	1	40	0	0	0	2	2
East Cole	0	0	0	0	0	1	1
Eckert	2	6	1	0	1	2	3
Esco as	1	100	0	0	0	0	0
Jacob	2	100	0	0	0	3	3
Jennings	0	0	0	0	0	1	1
King	1	0	1	0	0	0	0
N. Dale	6	102	3	0	2	3	5
N. Kohler	1	0	1	0	0	1	1
N. Gov. Wells	13	5,603	0	0	2	13	15
Laurel	1	0	1	0	0	0	0
Pettus	1	75	1	0	0	0	0
N. Pettus	2	275	0	0	0	0	0
Mathis	0	0	0	0	0	1	1
Moca	3	200	1	0	0	0	0
Sarnosa	3	75	2	0	1	1	2
SRC	1	150	0	0	0	0	0
Tuleta	0	0	0	0	0	1	1
Webster	0	0	0	0	0	1	1
Miscellaneous	34	155	29	3	15	83	98
Total Sept.	74	7,031	40	3	21	116	137
Total Aug.	70	14,948	44	3	25	115	140
Difference	4	7,917	4	0	4	1	3

WELLS COMPLETED
CEDAR CREEK POOL—BASTROP COUNTY
Reyes, Marts & Beavens 3 150
NORTH DALE POOL—BASTROP COUNTY
M. I. Harris, Chiquita Oil Co. 2 ..... abd
Riddle, Marts & Beavens 4-A 50
Riddle, Ogden & Reed 1-A 2
Duran, Floyd Dodson 1 ..... abd
Riddle, Marts & Beavens 2-A 50
Riddle, Marts & Beavens 1-A ..... abd
PETTUS POOL—BEE COUNTY
Fee, Mauldin 4 75
ECKERT POOL—BEXAR COUNTY
Brehm, Eckert & Son 7 6
I. A. Beck, Gatlin Oil Co. 16 ..... abd
N. GOV. WELLS POOL—DUVAL COUNTY
Duval County Ranch Co., Humble Oil & Ref. Co. 1 840
Hahl, Humble Oil & Ref. Co. 10 960
Hahl, Humble Oil & Ref. Co. 11 1200
Hahl, Humble Oil & Ref. Co. 12 1248
Hahl, Navarro Oil Co. 8 70
Hahl, Navarro Oil Co. 16 720
Hahl, Navarro Oil Co. 17 720
W. C. Riggs, Texas Co. 5 60
Duval County Ranch Co., Reynosa Oil Corp. 2-B 360
Duval County Ranch Co., Reynosa Oil Corp. 2-A 480
Duval County Ranch Co., Reynosa Oil Corp. 3-A 480
Lundell, Smith and Storey 4 75
W. C. Riggs, Texas Co. 4 90
N. KOHLER POOL—DUVAL COUNTY
G. W. Sutherland, Allen & Morris 1 ... abd
SARNOSA POOL—DUVAL COUNTY
Cuellar, Sun Oil Co. 2 ..... abd
Duval County Ranch Co., Texas Co. 4-A abd
Cuellar, Sun Oil Co. 6 75
S.R.C. POOL—DUVAL COUNTY
Duval County Ranch Co., S.R.C. Oil Co. 9 150
N. PETTUS POOL—KARNES COUNTY
McKinney, Begol Oil Co. 6 125
Porter-State, Magnolia 2 150
CHITTAM POOL—MAVERICK COUNTY
Chittam, Rycade Oil Corp. 1 ..... abd
JACOB POOL—McMULLEN COUNTY
Jacob, Loma Oil Co. 15-A 50
Jacob, Loma Oil Co. 16-A 50
KING POOL—NUECES COUNTY
King, John F. Camp 1 ..... abd

ESCOBAS POOL—ZAPATA COUNTY
Measles, Texas Co. 32 100
CUEVITAS POOL—STARR COUNTY
A. M. Guerra, Sun Oil Co. 2-A 40
LAUREL POOL—WEBB COUNTY
Sarah Lloyd, Smith & Storey 2 ..... abd
MOCA POOL—WEBB COUNTY
Duval County Ranch Co., Moca Oil 7.. abd
Duval County Ranch Co., D. R. Semmes 3 100
Duval County Ranch Co., Moca Oil 6.. 100

Wells completed 29
Production 8576
Abandoned 11
Gas production 0

MISCELLANEOUS COUNTIES
ATASCOSA COUNTY
Reiffer & Frobese, Texio Oil Co. 1 ... abd
Shaw, A. Blume 1 ..... abd
BASTROP COUNTY
Moncure, Hinton & Dodson 1 ..... abd
BEE COUNTY
Grover Heldenfels, C. F. Nichols and Harry Bruner 1 ..... abd
BEXAR COUNTY
S. W. Kearney, O. N. Beer 1 ..... abd
Palfrey, C. A. Smith 1 ..... abd
R. Diaz, C. J. LeCompte 3 ..... abd
Ridder, A. M. Blume 1 ..... abd
James Watson, M. L. Howard 1 ..... abd
Thos. Dilion, O. L. Ray 1 ..... abd
CALDWELL COUNTY
Brown, Cargill et al 1 ..... abd
DIMMITT COUNTY
Dr. A. J. Fitch, Ed Agglin 1 ..... abd
DUVAL COUNTY
W. K. Hoffman, T. J. Conway and C. A. Campbell 1 ..... gas
Duval County Ranch Co., S.R.C. Oil 9. 150
Wood-Welder, DeSoto Oil Co. 2 ..... gas
GOLIAD COUNTY
Lackey & Weldon, Gillette Oil Co. 1 .. abd
JIM HOGG COUNTY
J. Vela and Pena Bros., Cole Pet. Co. 1 abd
Holbien, R. F. Foree 1 ..... abd
LIVE OAK COUNTY
E. Terrell, Sheldon & Snider 1 ..... abd
MAVERICK COUNTY
Debona, Wright Stroman 1 5
McMULLEN COUNTY
Two Rivers Ranch, French Oil Corp. 1. abd
Reeves, S.R.C. Oil Corp. 1 ..... abd
Jefferson, McDowell & Vierson 1 ..... abd
J. T. Brown, John V. Edwards 1 ..... abd
Shiner, C. C. Shumway 3 ..... abd
MILAM COUNTY
Hoppe, Clark et al 1 ..... abd
STARR COUNTY
J. M. Martinez, F. R. Cooper 1 ..... abd
Guerra, Sun Oil Co. 1-C ..... gas
TRAVIS COUNTY
D. V. Collins, Holstron et al 1 ..... abd
WEBB COUNTY
Benavides, Danvers & Harrison 1 ..... abd
Bruni, Washabaugh & Roberts 1 ..... abd
A. S. Billings, Grey Oil Corp. 1 ..... abd
ZAPATA COUNTY
Alejandro Garcia, Stevens & Brown 1 . abd
A. M. Bruni estate, O. W. Killam 1 ... abd

Wells completed 34
Production 155
Abandoned 29
Gas production 100,000,000

Gulf Coast Fields

Summary of Field Operations

Texas

Field—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ariola	0	0	0	0	0	1	1
Barbers Hill	7	4,875	0	0	3	11	14
Batson	0	0	0	0	0	1	1
Big Creek	0	0	0	0	1	2	3
Boling	0	0	0	0	0	1	1
Buckeye	1	0	1	0	0	2	2
Conroe	40	66,834	3	1	7	34	41
Clay Creek	0	0	0	0	0	1	1
Damon Mound	1	0	1	0	0	1	1
Esperson	2	840	1	0	0	1	1
Fannett	0	0	0	0	1	2	2
Garwood	1	0	1	0	0	0	0
Goose Creek	0	0	0	0	0	2	2
Greta	16	6,833	0	1	6	22	28
Hankamer	0	0	0	0	0	1	1
High Island	3	912	1	0	0	4	4
Hockley	0	0	0	0	0	1	1
Hull	2	1,250	0	0	0	7	7
Humble	1	200	0	0	1	2	3
Keeran	1	0	1	0	0	0	0
Livingston	1	0	1	0	1	3	4
Louise	0	0	0	0	1	10	11
Manvel	0	0	0	0	2	4	6
McFaddin	1	0	1	0	0	2	2
Mykawa	0	0	0	0	0	1	1
N. Dayton	0	0	0	0	0	1	1
Pierce Jct.	2	420	0	0	0	3	3
Port Neches	1	206	0	0	1	1	2
Orange	0	0	0	0	0	1	1
Saratoga	1	0	1	0	2	1	3
Sugarland	0	0	0	0	1	0	1
Stratton Rdg.	0	0	0	0	0	1	1
Thompson	7	7,480	1	0	0	4	4
Tomball	4	638	1	1	3	2	5
Miscellaneous	12	0	12	0	14	36	50
Total Sept.	104	90,488	26	3	44	166	210
Total Aug.	107	82,252	24	6	64	159	231
Difference	3	8,236	2	3	20	7	21

South Louisiana

Choctaw	1	120	0	0	1	0	1
Dog Lake	0	0	0	0	1	0	1
Evangeline	0	0	0	0	0	1	1
Hackberry (East)	1	1,337	0	0	0	3	3
Hackberry (Old)	0	0	0	0	0	1	1
Gueydan	0	0	0	0	0	3	3
Iowa	1	0	1	0	0	7	7
Lake Pelto	1	0	1	0	0	0	0
Lake Washington	3	440	0	0	1	4	5
Lake Barre	0	0	0	0	0	2	2
Leesville	0	0	0	0	0	1	1
Lockport	0	0	0	0	0	2	2
Port Barre	0	0	0	0	1	1	2
Starks	1	0	1	0	0	2	2
Sulphur	3	1,233	0	0	0	1	1
Sorrento	0	0	0	0	0	1	1
Vinton	0	0	0	0	0	3	3
White Castle	0	0	0	0	0	1	1
Miscellaneous	3	0	3	0	5	18	23
Total Sept.	14	3,130	6	0	9	51	60
Total Aug.	25	5,962	18	0	13	39	52
Difference	11	2,832	12	0	4	12	8
Gulf Coast:							
Total Sept.	108	93,618	32	3	53	217	270
Total Aug.	132	88,214	42	6	77	198	283
Difference	24	5,404	10	3	24	19	13

WELLS COMPLETED
Texas
BARBERS HILL—CHAMBERS COUNTY
Barber, Mills Bennett Prod. Co. 1-C ...1791
E. W. Barber, Mills Bennett Prod. Co. Co. 4-A 1600
Kirby, Mills Bennett Prod. Co. 5 500
Wilburn, Mills Bennett Prod. Co. 6-A.... 250
Wilburn, Sun Oil Co. 12 44
Higgins, McAlbert Oil Co. 2-A 140
Kirby, Texas Gulf Prod. Co. 11-B 600

Wells completed 7
Production 4875
BUCKEYE—MATAGORDA COUNTY
Plotner, United North & South Dev. Co. 1 ..... abd
CONROE—MONTGOMERY COUNTY
Allen, Alpha Oil Co. 1 1200
Granger, E. S. Craft 1 198
So. Texas. Dev. Co., H. M. Crighton 2 . 241
Kirby-Bertrand, Feltex Oil Co. 4 440
Dobbins, Humble O. & R. Co. 9 1920
L. B. McComb, Humble O. & R. Co. 7.. 1944
T. B. McComb, Humble O. & R. Co. .. 1800
Madeley, Humble O. & R. Co. 22 2088
Madeley, Humble O. & R. Co. 23 1632
Madeley, Humble O. & R. Co. 24 ..... abd
Massey, Harrison & Abercrombie 7 2112
Moore, Houston Oil Co.-Tide Water Oil Co. 5 3000
Moore, Humble O. & R. Co. 18 2280
Moore, Humble O. & R. Co. 28 2040
Moore, Humble O. & R. Co. 32 2208
Moore, Humble O. & R. Co. 38 1704
Moore, Humble O. & R. Co. 42 1800
South Texas Dev. Co., Humble O. & R. Co. 41-A 2088
So. Texas Dev. Co., Humble O. & R. Co. 47-A 2112
So. Texas Dev. Co., Southern Liberty Oil Co. 4-B 1896
So. Texas Dev. Co., Humble O. & R. Co. 1-E 1224
So. Texas Dev. Co., Humble O. & R. Co. 2-E 1848
Tex-Osage, Malta Oil Co. 2 ..... gas
Hooper, W. M. Massie 4 2160
Cummings, Southland Oil Co. 5 1080
Hooper, R. D. Simonlton, rec., 2 1800
Hooper, R. D. Simonton, rec., 5 2280
Keystone Mills, Strake Pet., Inc. 2 2400
Clark, Sun Oil Co. 2 1840
Foster, Sun Oil Co. 8 2099
Foster, Sun Oil Co. 11 ..... abd
Foster, Sun Oil Co. 13 2304
Foster, Sun Oil Co. 15 1776
Foster, Sun Oil Co. 16 1080
Foster, Sun Oil Co. 18 1776
Dean, Tide Water Oil Co. 12 ..... abd
Eichlitz, Tide Water Oil Co. 3 2276
Krohn, Tide Water Oil Co. 9 2232
Lewis, Tide Water Oil Co. 24 2016
Lewis, Tide Water Oil Co. 25 1832
Lewis, Tide Water Oil Co. 26 2136

Wells completed 49
Production 66,834
Abandoned 3
Gas 1
Gas production 5,000,000
DAMON MOUND—BRAZORIA COUNTY
Bryan, Sinclair Prairie Oil Co. 31 ..... abd
ESPERSON—LIBERTY COUNTY
Esperson, Cranfill-Reynolds Co. 4 ..... abd
Moores Bluff, Cranfill-Reynolds Co. 11. 840

Wells completed 2
Production 840
Abandoned 1
GARWOOD—COLORADO COUNTY
Broussard, Plymouth Oil Co. 1 ..... abd
GRETA—REFUGIO COUNTY
O'Brien, Atlantic O. P. Co. 1 320
O'Brien, Atlantic O. P. Co. and Heyser & Heard 1 460
J. M. O'Brien, Blanco Oil Co. 2-B 575
J. J. O'Brien, Blanco Oil Co. 2-A 575
O'Brien, Circle W. Oil Co. 1 700
O'Brien, Circle W Oil Co. 2 404
O'Brien, Dash Oil Co. 2 700
O'Brien, Floboots Oil Corp. 1 433
J. F. B. Heard, Floboots Oil Corp. 1 .. gas
O'Brien, Greta Oil Corp. 1 347
O'Brien, Heyser & Heard 2 464
O'Brien, Edwin Jones 2-B 300
O'Connor, Nesral Oil Co. 1 300
O'Brien, Rutherford & Atlantic 1 336
O'Brien, Southwest Oil Corp. 1 569
O'Brien, Southwest Oil Corp. 2-B 350

Wells completed 16
Production 6833
Gas 1
HIGH ISLAND—GALVESTON COUNTY
Cade, Yount Lee Oil Co. 36 682
Smith, Yount Lee Oil Co. 17 230
Smith, Yount Lee Oil Co. 18 ..... abd

Wells completed 3
Production 912
Abandoned 1
HULL—LIBERTY COUNTY
Orgain, Houston Prod. Co. 1 350
Phoenix Dev. Co., Miramar Oil Corp. 2 900

Wells completed 2
Production 1250
HUMBLE—HARRIS COUNTY
Koehler, Texas Co. 22 (W.O.) 200
KEERAN—VICTORIA COUNTY
Gulf Prod. Co. 4 ..... abd
LIVINGSTON—POLK COUNTY
Grandbury & Smith, Sundby Oil Co. 1.. abd
McFADDIN—REFUGIO COUNTY
O'Connor, Humble O. & R. Co. 3 ..... abd
PIERCE JUNCTION—HARRIS COUNTY
Micheon, Czeraux & Mincheon 1 20
Settegast, Rio Bravo Oil Co. 22-A 400

Wells completed 2
Production 429
PORT NECHES—ORANGE COUNTY
Orange Natl. Bank, Texas Co. 1 206
SARATOGA—HARDIN COUNTY
Teel, Seven Wells Corp. 1 ..... abd
THOMPSON—FORT BEND COUNTY
A. Gubbels, Gulf Prod. Co. 5 1296
F. I. Booth, Humble & Gulf 18-A 1440
F. I. Booth, Humble & Gulf 19-A 126
Lockwood, Humble & Gulf 14-A 1488
Lockwood & Sharp, Humble & Gulf 21-A abd
Lockwood & Sharp, Humble & Gulf 23-A 1224
S. McCall, Texas Co. 1 1912

Wells completed 7
Production 7480
Abandoned 1
TOMBALL—HARRIS COUNTY
Bloecher, Humble O. & R. Co. 1 134
Gebhart, Humble O. & R. Co. 1 ..... abd
C. F. Hendricks, Humble O. & R. Co. 1. 504
E. Mueller, Texas Co. 1 ..... gas

Wells completed 4
Production 638
Abandoned 1
Gas 1

Miscellaneous Texas
AUSTIN COUNTY
Watson, Turnbull & Erwin 1 ..... abd
BRAZOS COUNTY
Clay, C. W. Adkins & J. O'Neill 1 .... abd
CHAMBERS COUNTY
Gau, Mills & Jones 1 ..... abd
GRIMES COUNTY
Greer, Petroleum Southwest Co. 1 .... abd
HARRIS COUNTY
Harrison, McCarthy et al 1 ..... abd
LIBERTY COUNTY
E. W. Boyt, Yount Lee Oil Co. 1 .... abd
MADISON COUNTY
Poteet, C. C. Foster ..... abd
SAN JACINTO COUNTY
Foster Lbr. Co., Piedmont Oil Co. 1 .. abd
WALLER COUNTY
A. C. Blumberg, Franklin et al 1 .... abd
B. Schwarz,-Texas Seaboard Oil Co. 1 . abd
WASHINGTON COUNTY
F. A. Ammons, Clark & Cowden 1 .... abd
WHARTON COUNTY
Dayvault, Dayvault-Tyler-Gardner 1 .. abd

Wells completed 12
Abandoned 12
CHOCTAW—IBERVILLE PARISH
Myrtle Grove, Standard Oil Co. of La.. 120
EAST HACKBERRY—CALCASIEU PARISH
Hanzen, Calcasieu Oil Co. 1 1337
IOWA—CALCASIEU PARISH
Heyd, Shell Pet. Corp. 4 ..... abd
LAKE PELTO—TERREBONNE PARISH
Lake Pelto, Texas Co. 9 ..... abd
LAKE WASHINGTON—PLAQUEMINES PARISH
Cockrell-Moran, Humble O. & R. Co. 15 240
Cockrell-Moran, Humble O. & R. Co. 10 200
Louisiana State, Freeport Sulphur Co. 7 abd

Wells completed 3
Production 440
STARKS—CALCASIEU PARISH
Industrial Lbr. Co., Union Sulphur Co. 2 abd
SULPHUR—CALCASIEU PARISH
Fee, Union Sulphur Co. 723 350
Fee, Union Sulphur Co. 757 163
Fee, Union Sulphur Co. 785 726

Wells completed 3
Production 1232

Miscellaneous Louisiana
CALCASIEU PARISH
Nelson, Quintana Oil Co. 1 ..... abd
PLAQUEMINES PARISH
LaFourche Basin Levee, Texas Gulf Sulphur Co. 3 ..... abd
ST. MARTINS PARISH
Toby, E. E. Bran et al 1 ..... abd

Louisiana Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	*Rgs.	Dlg.	Ttl.
Beauregard	0	0	0	0	0	1	1
Bienville	0	0	0	0	1	1	2
Bossier	0	0	0	0	1	8	9
Caddo	1	0	0	1	8	10	18
Caldwell	0	0	0	0	2	1	3
Catahoula	0	0	0	0	0	1	1
Claiborne	0	0	0	0	1	1	2
DeSoto	1	0	1	0	6	13	19
E. Carroll	1	0	1	0	0	0	0
Grant	0	0	0	0	0	3	3
Jackson	0	0	0	0	0	1	1
Morehouse	3	0	0	3	0	2	5
Natchitoches	0	0	0	0	1	5	6
Ouachita	3	0	0	3	1	3	4
Rapides	0	0	0	0	3	1	4
Red River	0	0	0	0	0	2	2
Richland	0	0	0	0	0	2	2
Sabine	14	912	10	0	14	40	54
Tensas	0	0	0	0	0	1	1
Union	2	0	1	1	1	0	1
Vernon	0	0	0	0	0	3	3
Webster	0	0	0	0	0	2	2
Ttl. Sept.	25	912	13	8	39	101	140
Ttl. Aug	40	3,040	23	7	36	93	129
Difference	15	2,128	10	1	3	8	11

*Gas production: Caddo, 8,000,000 feet; Morehouse, 24,372,000 feet; Ouachita, 6,516,000 feet; Union, 5,774,776 feet; total 44,662,776 feet.

WELLS COMPLETED
CADDO PARISH
9-16-16 G. M. Agurs, Calatex O. & G. 1 gas

Wells completed 1
Gas 1
Gas production 8,000,000
CLAIBORNE PARISH
2-21-7 Kinder, Leue Oil Co. 1 (rig) .. abd
DE SOTO PARISH
4-10-13 W. J. Hill, J. C. Prine 1 ..... dry

EAST CARROLL PARISH
42-21-12 Desha Lbr. Co., Marr & Collins 1 ..... dry
GRANT PARISH
20-7-3w Edenborn est., H. H. Temple.. abd
9-5-1w Guaranty Bank, H. H. Temple. abd
MOREHOUSE PARISH
17-22-5 Crossett Lbr. Co., United Gas Public Service Co. 29 ..... gas
25-22-5 Crossett Lbr. Co., United Gas Public Service Co. 30 ..... gas
12-20-4 Patton, United Gas Public Service Co. 2 ..... gas

Wells completed 3
Gas 3
Gas production 24,372,000

OUACHITA PARISH
10-18-4 McGee, Century Carbon Co. 3. gas
4-18-4 Nelson, Inabnet & Pipes 3 .... gas
10-17-5 W. Va. Land & Tiber Co., Millhaven Gas Corp. 1 ..... abd
4-18-4 Nelson, Inabnet & Pipes 2 .... gas

Wells completed 4
Gas 3
Gas production 6,516,000
Abandoned 1

SABINE PARISH
35-8-12 Barthold, J. E. Bauer 3 250
15-7-11 T. L. Andries, Conard Oil Co. 1 abd
15-7-11 T. L. Andries, Conard Oil Co. 2 abd
15-7-11 T. M. Phillips, Cummins Oil 1. 100
32-9-13 Aaron, Feazel & Davenport 1 .. dry
10-9-13 C. Jackson, Helena O. & G. 1. 522
9-9-12 J. F. Sistrunk, R. T. Henderson 1 ..... dry
23-9-13 Bowman-Hicks, W. F. Lacy 1 .. 40
29-9-13 Edward's, Lambert et al 1 .... dry
2-8-10 McGough, George LeGrand 1 .. dry
16-9-13 Frost-Johnson, Joe Modisette 3 dry
16-7-11 Stille, Pugh-Hickman Drlg. 1) dry
23-9-13 Bowman-Hicks, Robertson Dirg. Co. 1 ..... dry
9-9-13 G. I. Paul, E. M. Self et al 1.. dry

Wells completed 14
Production 912
Dry 10

UNION PARISH
7-22-2e Frost Lbr. Co., J. M. Moody 1 dry
24-20-3e Neal & Moore, Nemours Corp. 2 ..... gas

Wells completed 2
Gas 1
Gas production 5,774,776
Dry 1

Arkansas Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Arkansas	0	0	0	0	0	1	1
Columbia	0	0	0	0	0	3	3
Desha	0	0	0	0	0	1	1
Hempstead	0	0	0	0	1	1	2
Jefferson	0	0	0	0	1	1	2
Lafayette	0	0	0	0	0	1	1
Little River	0	0	0	0	0	1	1
Lonoke	0	0	0	0	1	0	1
Miller	0	0	0	0	0	9	9
Nevada	0	0	0	0	1	2	3
Ouachita	0	0	0	0	1	2	3
Poinsett	0	0	0	0	1	0	1
Union	1	0	1	0	2	4	6
Woo'ruff	0	0	0	0	0	1	1
Yell	0	0	0	0	0	1	1
Ttl. Sept.	1	0	1	0	8	28	36
Ttl. Aug.	5	0	5	0	7	26	33
Difference	4	0	4	0	1	2	3

Alabama Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Baldwin	0	0	0	0	0	1	1
Cullman	1	0	1	0	0	0	0
Escambia	0	0	0	0	0	1	1
Lamar	0	0	0	0	0	1	1
Ttl. Sept.	1	0	1	0	0	3	3
Ttl. Aug.	0	0	0	0	0	4	4
Difference	1	0	1	0	0	1	1

WELLS COMPLETED
CULLMAN COUNTY
35-8-4w King, C. V. Carey 1 ..... dry

Mississippi Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas*	Rgs.	Dlg.	Ttl.
Covington	1	0	1	0	0	1	1
Hinds	1	0	0	1	2	5	7
Jones	0	0	0	0	0	1	1
Lamar	0	0	0	0	1	1	2
Madison	0	0	0	0	0	1	1
Newton	0	0	0	0	0	1	1
Pearl River	0	0	0	0	1	0	1
Rankin	2	0	1	1	3	5	8
Scott	0	0	0	0	0	1	1
Simpson	0	0	0	0	0	1	1
Walthall	0	0	0	0	1	0	1
Warren	0	0	0	0	0	1	1
Webster	0	0	0	0	0	1	1
Wilkinson	0	0	0	0	0	1	1
Winston	0	0	0	0	0	1	1
Ttl. Sept.	4	0	2	2	11	19	30
Ttl. Aug.	2	0	1	1	8	15	23
Difference	2	0	1	1	3	4	7

*Gas production: Hinds, 30,000,000 feet; Rankin, 39,872,000 feet; total, 69,872,000 feet.

MISSISSIPPI
WELLS COMPLETED
COVINGTON COUNTY
29-9n-16 Eastman-Gardiner, Eastman-Gardiner interests 1 ..... dry
HINDS COUNTY
26-6-1e Overstreet, Atkins & Hightower 1 ..... gas

Wells completed 1
Gas 1
Gas production 30,000,000

RANKIN COUNTY
36-6-1e Love Pet. Co., J. A. Alexander 2 ..... gas
31-6-2e Hawkins, J. A. Baker et al 1.. dry

Wells completed 2
Gas 1
Gas production 39,872,000
Dry 1

East Texas Border Counties

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Bowie	0	0	0	0	0	1	1
Cass	0	0	0	0	1	0	1
Harrison	1	0	1	0	0	1	1
Marion	1	0	1	0	0	1	1
Panola	1	0	1	0	0	4	4
Red River	0	0	0	0	1	3	4
Shelby	0	0	0	0	1	4	5
Ttl. Sept.	3	0	3	0	3	14	17
Ttl. Aug.	4	0	4	0	6	11	17
Difference	1	0	1	0	3	3	0

WELLS COMPLETED
HARRISON COUNTY
Wm. Steele Sur.: Rudd, Great Eastern Pet. Co. 1 ..... dry
MARION COUNTY
M. G. Noll Sur.: R. W. Player, Dragon Oil Co. 2 ..... dry
PANOLA COUNTY
P. Martin Sur.: H. B. Ivy, Carl Reamer et al 1 ..... abd

Rocky Mountain Area

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Eddy	0	0	0	0	1	10	11
Lea	1	310	0	0	0	4	4
McKinley	0	0	0	0	0	7	7
San Juan	0	0	0	0	1	14	15
San Miguel	0	0	0	0	0	3	3
Santa Fe	0	0	0	0	0	3	3
Valencia	0	0	0	0	0	3	3
Miscellaneous.	0	0	0	0	1	11	12
Ttl. Sept.	1	310	0	0	3	55	58
Ttl. Aug.	4	23,068	2	0	6	54	60
Difference	3	22,758	2	0	3	1	2

WELLS COMPLETED
34-20-34 Lynch, Texas Co. 3-A 310

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Boulder	0	0	0	0	0	4	4
Elbert	0	0	0	0	0	3	3
Fremont	0	0	0	0	0	2	2
Jackson	0	0	0	0	0	5	5
Larimer	0	0	0	0	0	4	4
Las Animas	0	0	0	0	1	1	2
Moffat	0	0	0	0	0	7	7
Montezuma	0	0	0	0	0	2	2
Morgan	0	0	0	0	1	1	2
Rio Blanco	1	138	0	0	0	1	1
Routt	0	0	0	0	2	1	3
Weld	0	0	0	0	0	3	3
Miscellaneous.	0	0	0	0	2	16	18
Ttl. Sept.	1	138	0	0	6	50	56
Ttl. Aug.	3	0	3	0	5	48	53
Difference	2	138	3	0	1	2	3

WELLS COMPLETED
30-2n-102 Calif.-Raven, Calif. Co. 1 138

WYOMING

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Big Horn	0	0	0	0	1	5	6
Carbon	0	0	0	0	0	6	6
Converse	1	0	1	0	0	4	4
Crook	0	0	0	0	0	6	6
Fremont	0	0	0	0	0	4	4
Hot Springs	0	0	0	0	0	4	4
Natrona	1	2	0	0	3	6	9
Niobrara	1	0	1	0	0	3	3
Sweetwater	0	0	0	0	1	5	6
Sublet	0	0	0	0	0	5	5
Uinta	0	0	0	0	0	5	5
Washakie	0	0	0	0	0	4	4
Weston	2	175	0	0	2	9	11
Miscellaneous.	0	0	0	0	1	6	7
Ttl. Sept.	5	177	2	0	8	72	80
Ttl. Aug.	3	28	2	3	8	66	74
Difference	3	149	0	3	0	6	6

WELLS COMPLETED
14-46-64 Chadron-Osage Oil Co. 20 75
14-46-64 Chadron-Osage Oil Co. 22 100
27-36-65 Argo, J. M. Huber Corp. 2 ... dry
29-36-85 Ames, Triangle Oil 2 2
17-31-71 Cashner, Jas. A. Brady et al 1.. dry

Wells completed 5
Production 177
Dry and abandoned 2

MONTANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Carbon	0	0	0	0	0	5	5
Carter	1	0	1	0	0	0	0
Fergus	1	0	1	0	0	1	1
Glacier	7	378	1	2	1	11	12
Liberty	0	0	0	0	0	3	3
Teton	0	0	0	0	0	3	3
Toole	8	31	4	1	0	0	0
Miscellaneous.	0	0	0	0	0	12	12
Ttl. Sept.	17	409	7	3	1	35	36
Ttl. Aug.	8	354	0	1	4	41	45
Difference	9	55	7	2	3	6	9

WELLS COMPLETED
11-34-6w Williams, Mont. Headlight Oil 1 20
14-34-6w Matson, A. P. Consd. Oil 2 .. 50
1-35-5w Fee, Mont. Power Gas Co. 1 .. gas
14-34-5w Krueger, Yukon Oil Co. 1 .. dry
21-28-36-5 Vermont L. & T., Mont. Power Gas Co. 1 ..... gas
3-34-6w Ewing, Consd. Gas Co. 1 108
35-34-6w Walburger, A. B. Cobb 1 200
21-14-28 Blackhawk Oil Co. 1 ..... dry
11-2n-59 Carter et al 1 ..... dry
26-35-3w Ke-Sun Oil Co. 4 ..... dry
27-35-3w Davis, Majestic Oil Co. 4 dry
29-35-2w Abell, B. G. Horton 6 .... dry
8-35-2w A. Beardslee 1 ..... dry
26-35-3w Godcerts, Agen Drlg. Co. 1 .. gas
17-35-2w Halter, S. V. Day 1 20
19-35-2w Pfabe & Engelking 4 1
36-34-1w State, Frank Miller 1 10

Wells completed 17
Production 409
Gas 3
Gas production 15,000,000
Dry and abandoned 7

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Total Sept.	0	0	0	0	1	17	18
Total Aug.	0	0	0	0	1	17	18
Difference	0	0	0	0	0	0	0

Eastern Fields

Summary of Completed Work

Field—	Comp.	Prod.	Dry	Gas
Bradford	169	176	6	0
Allegany	9	43	0	0
N. Y.-Pa. gas	6	0	4	2
Middle Field	13	31	0	0
Venango-Clarion	7	7	1	1
Butler-Armstrong	2	5	1	0
S. W. Pa.	9	10	0	5
Southeast Ohio	21	176	7	4
West Virginia	28	517	8	16
Total September	264	965	21	28
Total August	174	814	18	26
Difference	90	151	3	2

Summary of Work Under Way

Field—	Rigs	Dlg.	Ttl.
Bradford	18	75	93
Allegany	1	16	17
Venango-Clarion	0	8	8
Middle Field	0	12	12
Butler-Armstrong	3	5	8
N. Y.-Pa. gas	3	26	29
S. W. Pa.	5	16	21
Southeast Ohio	11	23	34
West Virginia	27	70	97
Total September	68	251	319
Total August	59	220	279
Difference	9	31	40

WELLS COMPLETED
BRADFORD
Rew, Bovaird & Hamlin 14-A ....pressure
Bingham 392, Lawton, Boyle & Raymond 36 1
Bingham 423, James Evans et al 24 .. 1
Bingham 464, R. S. Pringle .....pressure
Bingham 404, Kendall Ref. Co. (3 wells) .....pressure
Bingham 401, Kendall Ref. Co. (4 wells) ..... pressure
Fee, M. Hungiville 16 2
Burger, Parker Farm Oil Co. 15 2
Smith, Hillside Oil Co. 20 2
Fee, Devore Oil Co. 57 4
Fee, Devore Oil Co. 58 5
Fee, F. P. Lawton 102 1
Freeman, Stuckel & Freeman 46 5
Fee, Dallas Oil Co. 109 2
Corwin, Cora Simon 44 3
Fee, Corwin & Gallagher 25 10
Fee, Lincoln & Brink 55 1
Fee, Linwood Oil Co. 37 3
Fee, George Van Vechten & Son 51 .. 5
Booth, C. C. Lynn 19 3
Fee, Smith Oil Corp. (3 wells)....pressure
Completions on the lines of the Bradford Transit Co. (62 wells) 62
Fee, Forest Oil Corp. (3 wells) 3
Fee, Forest Oil Corp. (8 wells)....pressure
Fee, Forest Pet. Corp. (5 wells) 5
Fee, Forest Pet. Corp. (5 wells)..pressure
Fee, Forest Dev. Corp. (3 wells) 3
Fee, Niagara Oil Corp. (20 wells) 20
Fee, Niagara Oil Corp. (29 wells) pressure
Fee, G. W. Smith estate 7
Rounds, J. W. Kaufman estate 2
Rounds, J. W. Kaufman estate 10
Loop, N. V. V. Franchot 10
Rasey, Chief Prod. Co. 1
Weston, Rice et al 1

Completions 169
Production 176
Pressure 54

ALLEGANY
Fee, C. M. and F. J. Lippert 2
Fee, J. H. Brahaney 1
Herrick, N. V. V. Franchot 25
Fee, Ryder Scott Co. 10
Fee, Josephine A. Spindler et al 1
Completions on lines of Bradford Transit Co. (4 wells) 4

Completions 9
Production 43

NEW YORK-PENNSYLVANIA GAS
Bailey, William McGraw ..... dry
Palmer, Finance O. & G. Co. ..... dry
Bump, Syracuse Alliance Co. ..... dry
Button, C. L. Jack et al ..... gas
Eddington, Peterman et al ..... dry
Willsey, Wyoga-Schrack Corp. ..... gas

Completions 6
Dry 4
Gas 2

MIDDLE FIELD
WELLS COMPLETED
Middaugh, A. L. and L. M. Lilly 1
Middaugh, Dusenberry et al 1
Scio, Duke estate 1
Fee, Sunny Oil Co. 2
Fee, Coast & Storms 2
Kapp, T. H. Kervin 3
Burns, Messer Oil Co. 5
Barns, Messer Oil Co. 5
Gridiron, Gridiron Oil Co. 3
Duke, Schofferle Bros. 3
Duke, Schofferle Bros. 1
Sprague, Redwood Oil Co. 3
Yaggie, C. V. Card 1

Completions 13
Production 31

VENANGO-CLARION
Fee, Fryburg Motor Co. 8 ..... dry
Bowers, Titusville Trust et al 9 1
Hasson, Graham, Eakin et al 7 1
Hasson, Graham, Eakin et al 8 2
McElphatrick, McElphatrick & Witherup 38 2
Neely, Edensburg O. & G. 1 ..... gas
Fee, H. E. Alleman 3 1

Completions 7
Production 7
Dry 3
Gas 1

BUTLER-ARMSTRONG
Meals, Carl Hilliard et al 2 6
Fee, E. E. Campbell ..... dry

Completions 2
Production 5
Dry 1

SOUTHWEST PENNSYLVANIA
ALLEGHENY COUNTY
Degelman, E. L. Oles 1 ..... gas
Noving, O. Miller 2 ..... gas
GREENE COUNTY
Sicklesmith, J. L. Garard & Co. 8 ... 1
Sicklesmith, J. L. Garard & Co. 9 ... 5
John Sicklesmith, J. L. Garard & Co. 1 1
Morse, Convex Glass Co. 1 ..... gas
Holmes, Earhart & Co. 1 ..... gas
WASHINGTON COUNTY
Van Kirk, Union Gasoline & Oil Co. 1. gas
McKennan, E. H. and J. B. Tague 6 .. 3

SOUTHEAST OHIO
WELLS COMPLETED
ASHLAND COUNTY
Black, C. O. Moore 3 20
ATHENS COUNTY
Sunday Creek Coal Co., Preston Oil Co. 1,524 3
COSHOCTON COUNTY
Rodke, Ohio Oil Co. 5 50
McKee, Kunditz-Hulse, Inc. 2 35
HOCKING COUNTY
Sunday Creek Coal Co., Ohio Fuel Gas Co. 1,523 ..... gas
JEFFERSON COUNTY
Hardy, Altamont Oil Co. 1 20
Butts, Lee & Co. 1 ..... dry
MEDINA COUNTY
Weaver, D. A. Lake 5 20
Ross, Oko O. & G. Co. 41 2
Sanford & Watson, Oko O. & G. Co. 1. 5
Severcool, Preston Oil Co. 5 20
Weaver, D. A. Lake 6 ..... dry
MORGAN COUNTY
Giles, McIntire & Guthrie et al 2 .. gas
Massy, Geo. B. Hazlett 2 ..... dry
MEIGS COUNTY
Hiland, A. N. Bengel 1 ..... dry
MUSKINGUM COUNTY
Weaver, Hopewell Fuel Gas Co. 1 ... gas
NOBLE COUNTY
Webber & Cain, D. J. Peaker et al 1 .. dry
WASHINGTON COUNTY
Martin, Martin Oil Co. 2 1
Bachelor, Kevin Corp. et al 1 ..... dry
Semmler, Penn-Ohio Gas Co. 1 ..... gas
Pryor, Buckley & McCall 1 ..... dry

WEST VIRGINIA
WELLS COMPLETED
BOONE COUNTY
Pond Fork Coal Co., Yawkey O. & G. 13 dry
CALHOUN COUNTY
Yoke, W. J. and O. L. Yoke 3 ..... gas
Fowler, Creed Barker et al 1 ..... gas
Yoke, Chemical Oil Co. 1 ..... gas
Hays, F. F. McIntosh 3 ..... gas
Postlethwait, Grant Fowler 1 ..... dry
Jones, Cain & Rothwell 1 ..... gas
CLAY COUNTY
Bell Creek Land Co., Godfrey L. Cabot 1 dry
GILMER COUNTY
Gainer, McCall Drlg. Co. 1 ..... gas
Gainer, Clem S. Morris 1 ..... gas
HARRISON COUNTY
Peck, Hope Nat. Gas Co. 1 ..... gas
KANAWHA COUNTY
Goshorn et al, Marshall & Price 9 ... gas
Huntington, Godfrey L. Cabot 41 ..... dry
LINCOLN COUNTY
Thompson, Turtle Lick Gas Co. 2 .... gas
LOGAN COUNTY
Guyan Merch Co., W. Va. Gas Corp. 37 gas
MARION COUNTY
Freeland, Victor O. & G. Co. 1 ..... dry
PLEASANTS COUNTY
State farm, L. C. White 3 ..... dry
Jones, Dinsmoor & Co. 1 ..... dry
Gorrell, Albert Neeley et al 2 ..... dry
PUTNAM COUNTY
Phelps, United Fuel Gas Co. 4,378 .... gas
RITCHIE COUNTY
Overton, Deem & Overton 1 ..... gas
Haught, J. F. Deem 2 ..... gas
Frederick, Smith & Hendershot 1 400
Bail, Richards Farm Oil Co. 1 2
Coyle, Bode & Stoffle 2 ..... gas
Satterfield, Elder et al 2 100
ROANE COUNTY
Riddle, Reedy O. & G. Co. 4 15
WAYNE COUNTY
Adkins, W. Va. Gas Corp. 1 ..... gas

Lima Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	1	5	0	0	0	3	3
Hancock	1	5	0	0	0	0	0
Allen	0	0	0	0	0	2	2
Auglaize	0	0	0	0	0	2	2
Mercer	0	0	0	0	0	1	1
Sandusky	0	0	0	0	0	2	2
Lucas	0	0	0	0	0	1	1
Ottawa	0	0	0	0	0	1	1

Seneca	3	9	0	3	0	4	4
Wyandot	13	475	4	4	1	8	9
Hardin	1	0	0	1	0	1	1
Williams	0	0	0	0	0	1	1
Total Sept.	19	485	4	8	1	26	27
Total Aug.	13	225	5	2	1	27	28
Difference	6	260	1	6	0	1	1

WELLS COMPLETED

WOOD COUNTY

Troy—Geo. Baker, Bell & Leapper 1 ... 5

HANCOCK COUNTY

Eagle—Geo. Crozier, S. M. Steen & Co. 30 ... 5

SANDUSKY COUNTY

Jackson—J. J. Iches, Ohio Oil 14 ... abd
Woodville—M. Niehasmeyer, Gibsonburg Banking Co. No. 3, 1, 2 ... abd
Sophia Nuhfer, Gibsonburg Banking Co. 3, 6, 9 ... abd
B. Flick, Gibsonburg Banking Co. 1, 2, 3, 4, 5, 6, 7, 8, 9 ... abd

Wells abandoned ... 14

LUCAS COUNTY

Monclova—Galbraith, Dillon & McFrederick & Co. 1, 2 ... abd

SENECA COUNTY

Liberty—Nick Weber, Mrs. L. E. Harpster 3 ... gas
Pleasant—Fray, Murphy Sons 3 ... gas
S. C. Bretz, S. O. Bretz 1 ... gas

Wells completed ... 3
Gas ... 3

WYANDOT COUNTY

Crane—M. Brillhardt, Jones & Coyle 5 ... 5
J. T. Brown, Pitt Oil & Gas Co. 1 ... 70
H. E. Myers, McPheron & Co. 1 ... dry
Adolph Veith, Upper Sandusky O. & G. Co. 1 ... gas
Oscar J. Weiker, Upper Sandusky O. & G. Co. 4 ... 350
A. G. Smith, Lang & Co. 1 ... dry
Mary Huffman, Saladay & Co. 1 ... gas
D. Smith, Crane Township O. & G. 2 ... 25
B. C. Root, Robt. W. Kirk & Co. 2 ... gas
Louis Brandt, Keiner & Co. 4 ... 25
Chas. S. Dix, E. W. Salliday 1 ... dry
Salem—W. P. Reile, Toledo Drlg. Co. 3 dry
W. P. Reile, Toledo Drlg. Co. 4 ... gas

Wells completed ... 13
Production ... 475
Dry ... 4
Gas ... 4

HARDIN COUNTY

Blanchard—Ida Wedertz, Bert Sheldon 2 ... gas

Kentucky Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ohio	0	0	0	0	0	12	12
Daviess	2	26	1	0	0	14	14
Hancock	7	45	5	0	0	6	6
McLean	0	0	0	0	0	4	4
Muhlenberg	2	75	0	1	0	2	2
Madison	0	0	0	0	0	1	1
Bath	0	0	0	0	0	1	1
Lee	0	0	0	0	0	1	1
Knox	0	0	0	0	0	1	1
Edmonson	0	0	0	0	0	1	1
Todd	0	0	0	0	0	1	1
Grayson	0	0	0	0	1	1	2
Warren	0	0	0	0	0	3	3
Allen	3	0	3	0	1	1	5
Total Sept.	14	146	9	1	2	49	51
Total Aug.	30	373	16	0	2	56	58
Difference	16	227	7	1	0	7	7

WELLS COMPLETED

DAVIESS COUNTY

Owensboro—Martha A. Sparks, Hupp & Duff 5 ... 26
Utica area, George Trout & Co. 1 ... dry

Wells completed ... 2
Production ... 26
Dry ... 1

HANCOCK COUNTY

Pellville—Tillie Keown, Hupp & Duff 1 dry
O. T. Smith, O. Donnell & Co. 1 ... dry
Cushionberry, Walker & Co. 2 ... dry
Chas. Rearden, Walker & Co. 1 ... dry
John Mercer, Walker & Co. 1 ... dry
Wm. House, Ed M. Egg Oil & Gas Co. 1 ... 25
Wm. House, Ed M. Egg Oil & Gas Co. 2 ... 20

Wells completed ... 7
Production ... 45
Dry ... 5

MUHLENBERG COUNTY

Greenville—A. F. Walker, Ellis & Young 1 ... gas
Jack Ebling, H. K. Oil Co. 1 ... 75

Wells completed ... 2
Production ... 75
Gas ... 1

ALLEN COUNTY

Scottsville—E. H. Woods, H. H. Coughill & Co. 50 ... dry
Harve McCleary, H. B. Bastrus & Co. 1 ... dry
Jim Bryant, H. B. Bastrus & Co. 1 ... dry

Wells completed ... 3
Dry ... 3

Central Ohio Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ashland	2	20	1	0	1	1	2
Lorain	4	0	1	3	1	4	5
Medina	4	46	0	0	1	1	2
Wayne	0	0	0	0	1	1	2
Holmes	0	0	0	0	1	0	1
Summitt	1	0	0	1	4	2	6
Fairfield	1	0	9	1	0	2	2
Richland	0	0	0	0	0	1	1
Knox	2	5	0	1	1	2	3
Coshocton	3	125	0	0	0	1	1
Licking	2	0	0	2	3	5	8
Muskingum	3	0	2	1	0	5	5
Athens	9	3	3	5	1	3	4
Tuscarawas	2	0	0	2	3	2	5
Trumbull	1	0	1	0	0	0	0
Portage	0	0	0	0	0	2	2
Stark	6	0	0	6	3	33	36
Belmont	2	0	0	2	1	10	11
Guernsey	1	0	1	0	0	5	5
Cuyahoga	2	0	1	1	0	1	1
Crawford	0	9	0	0	0	1	1
Gallia	0	0	0	0	0	1	1
Scioto	0	0	0	0	0	1	1
Pike	0	0	0	0	0	2	2
Carroll	0	0	0	0	0	4	4
Columbiana	1	0	0	1	0	1	1
Total Sept.	45	199	10	26	21	91	112
Total Aug.	36	178	13	15	29	88	117
Difference	9	21	3	11	8	3	5

WELLS COMPLETED

ASHLAND COUNTY

Jackson—Paul Bridenstine, Ohio Fuel Gas 1-5,738 ... dry
Mohican—Geo. W. Black, Moore & Co. 3 20

Wells completed ... 2
Production ... 20
Dry ... 1

LORAIN COUNTY

Lagrane—Cleveland Quarries, Wittmer O. & G. 1 ... gas
Grafton—H. W. Ingersoll, Wittmer Oil & Gas 1 ... gas
Carlisle—A. G. Myers, Ohio Fuel Gas 1-5,737 ... gas
D. W. Rosencranz, Ohio Fuel Gas 1-5,746 ... gas

Wells completed ... 4
Gas ... 3
Dry ... 1

MEDINA COUNTY

Chatham—L. A. Severcool, Preston Oil 5-1,528 ... 21
Sanford-Watson, O. K. Oil & Gas 1 ... 5
Litchfield—L. A. Severcool, D. A. Lake 6 ... 29

Wells completed ... 3
Production ... 46

SUMMITT COUNTY

Greene—Everett Bexler, East Ohio Gas 3 ... gas

FAIRFIELD COUNTY

Berne—C. B. Ricketts, City Nat. Gas Works 3 ... gas

KNOX COUNTY

Union—A. C. Briggs, Ohio Fuel Gas 1-5,736 ... 5
Monroe—H. E. Perkins, H. E. Perkins 2 gas

Wells completed ... 2
Production ... 5
Gas ... 1

COSHOCTON COUNTY

Perry—C. D. Harris, Preston Oil 1-1,522 25
Rolla McKee, Hulse-Kundtz, Inc. 2 ... 50
Clark—Rhody heirs, Ohio Oil 5 ... 50

Wells completed ... 3
Production ... 125

LICKING COUNTY

Franklin—O. E. Kraeger, Wehrle Gas 1 gas
Granville—Gail Baker, Wehrle Gas 2 ... gas

Wells completed ... 2
Gas ... 2

MUSKINGUM COUNTY

Muskingum—R. A. Miller, Mid-East Oil & Gas 1 ... dry
Washington—L. W. Thomas, Wittmer & Atha 1 ... dry
Brush Creek—T. B. Weaver, Hopewell Gas & Fuel 1 ... gas

Wells completed ... 3
Gas ... 1
Dry ... 2

ATHENS COUNTY

Berne—Ruth Brooks, Ohio Fuel Gas 1 .. dry
H. Croston, Ohio Fuel Gas 1 ... dry
Elmer Connor, N. R. Oil & Gas 1 ... dry
L. Lovell & Co., John Bowman 5 ... gas
Trimble—Sunday Creek Coal, Ohio Fuel Gas 104 ... 3
Lodi—J. E. Ruth, Ohio Fuel Gas 1-528 gas
W. M. Harris, Fairfield Gas Co. 2 ... gas
H. A. Pinkerton, Ohio Fuel Gas 1 ... gas
Cannon—Mansfield, Stewart & Ross 2 ... gas

Wells completed ... 9
Production ... 3
Gas ... 5
Dry ... 3

TUSCARAWAS COUNTY

Fairfield—H. B. Gobart, Frey & Co. 1, gas
J. H. Weaver, Lyons & Piefer 5 ... gas

Wells completed ... 2
Gas ... 2

TRUMBULL COUNTY

Newton—Wm. H. Kain, Johnson & Co. 1 dry

STARK COUNTY

Jackson—Leonard Stockert, East Ohio Gas 2 ... gas
Plain—Stewart Bexler, East Ohio Gas 1 gas
Hoover Co., Hoover Dev. Co. 1 ... gas
Forest Hill Cemetery, White & Co. 1 gas
J. P. Festerly, Ohio Fuel Gas 1 ... gas
A. and L. Stephens, Brendel Prod. Co. 1 ... gas

Wells completed ... 6
Gas ... 6

BELMONT COUNTY

Somerset—W. T. Lyne, A. G. Peters & Co. 5 ... gas
Union—J. H. Lynn, Ohio Fuel Gas 1 ... gas

Wells completed ... 2
Gas ... 2

GUERNSEY COUNTY

Westland—A. Kerr, C. C. Wharton, 1 .. dry

CUYAHOGA COUNTY

Strongville—Frank M. Mussehl, Ohio Fuel Gas 1-5,744 ... gas
Olmstead—J. Merkle, Obermiller & Co. 2 dry

Wells completed ... 2
Gas ... 1
Dry ... 1

COLUMBIANA COUNTY

Hanover—Fowler, Unknown 1 ... gas

Indiana Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Gibson	0	0	0	0	0	5	5
Pike	1	0	0	1	0	5	5
Sullivan	0	0	0	0	0	3	3
Daviess	0	0	0	0	0	6	6
Warrick	0	0	0	0	0	1	1
Vigo	0	0	0	0	0	2	2
Spencer	0	0	0	0	0	2	2
Perry	3	17	0	0	0	6	6
Green	0	0	0	0	0	1	1
Harrison	0	0	0	0	0	2	2
Huntington	0	0	0	0	0	1	1
Jay	0	0	0	0	0	1	1
Randolph	1	0	1	0	0	0	0
Porter	0	0	0	0	0	1	1
Stark	0	0	0	0	0	1	1
Martin	0	0	0	0	1	0	1
Vanderburg	2	40	0	1	0	8	8
Total Sept.	7	57	1	2	1	45	46
Total Aug.	14	175	3	5	1	29	30
Difference	7	118	2	3	0	16	16

WELLS COMPLETED

PIKE COUNTY

Washington—Craig heirs, Bell, Trussler & Co. 1 ... gas

PERRY COUNTY

Clark—Henry Delaisee, Conyers & Bugg 3 ... 5
J. Leeclier, N. N. Smith 1 ... 10
Tobin—J. A. Cook, Moorehead & Gard 1 2

RANDOLPH COUNTY

Jackson—Alvilda Smiley, Henderson Bros. 1 ... dry

VANDERBURG COUNTY

Center—Southern Indiana Gas & Elec., Knapp & Wood 2 ... gas
J. W. Biltman, Foreman & Miller 1 .. 40

Illinois Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	0	0	0	0	0	1	1
Crawford	1	0	1	0	1	2	3
Marion	0	0	0	0	0	2	2
Boone	0	0	0	0	0	1	1
Jefferson	0	0	0	0	0	1	1
Jasper	0	0	0	0	0	1	1
Clinton	0	0	0	0	0	1	1
Bond	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Total Sept.	1	0	1	0	1	11	12
Total Aug.	3	2	2	0	1	12	13
Difference	2	2	1	0	0	1	1

WELLS COMPLETED

CRAWFORD COUNTY

Robinson—Lizzie Coulter, Frank Ellison & Co. 1 ... dry

Michigan Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Midland	22	16,438	1	0	31	64	95
Isabella	4	6	3	1	29	24	53
Clare	0	0	0	0	4	1	5
Oceana	5	100	4	0	5	10	15
Lake	0	0	0	0	0	2	2
Iosco	0	0	0	0	0	1	1
Gratiot	0	0	0	0	3	2	5
Cass	0	0	0	0	2	1	3
Kent	0	0	0	0	1	2	3
Emmett	0	0	0	0	0	1	1
Leelanau	0	0	9	0	1	0	1
Saginaw	1	0	1	0	1	0	1
Montmorency	0	0	0	0	3	0	3
Sanilac	0	0	0	0	3	0	3
Newyago	0	0	0	0	0	2	2
Shiawassee	0	0	0	0	1	3	4
Allegan	0	0	0	0	1	2	3
Livingston	0	0	0	0	1	2	3
Oscola	0	0	0	0	1	0	1
Alpena	0	0	0	0	1	1	2
Cheboygan	0	0	0	0	0	1	1
Oakland	0	0	0	0	0	1	1
Macomb	0	0	0	0	1	1	2
Genessee	0	0	0	0	1	0	1
Mecosta	0	0	0	0	1	0	1
Antrim	0	0	0	0	1	0	1
Monroe	0	0	0	0	0	1	1
St. Clair	0	0	0	0	3	0	3
Muskegon	1	0	1	0	9	7	16
Ogemaw	0	0	0	0	5	1	6
Montcalm	0	0	0	0	0	1	1
Lapeer	0	0	0	0	1	0	1
Gladwin	0	0	0	0	0	1	1
Total Sept.	33	16,538	10	1	111	131	242
Total Aug.	25	17,111	6	1	105	105	210
Difference	8	573	4	0	6	26	32

WELLS COMPLETED

MIDLAND COUNTY

Greendale—Paul D. Wampler, Geo. W. Giffert 1 ... 250
A. Schaeffer, McClanahan, Inc., 2 ... 70
Chas. Mullett & Co., Pure Oil Co. 9 .. 15
State land, Talbot Oil Co. 5-B ... 19
Porter—G. H. McCann, Wells Bros. 1 .. dry
A. C. Breu, McClanahan Oil 1 ... 455
G. R. and M. Hathaway, Wm. J. Wiltrustee, 1 ... 100
Farmers State Bank, J. Mark Harvey, trustee, 1 ... 25
J. C. Hill, Stork Oil Co. 1 ... 100
C. E. Baxter, Stork Oil Co. 1 ... 100
Nina Naramore, Pure Oil Co. 5 ... 2500
F. W. Howard, Pure Oil 1 ... 3600
Geo. W. Whitney, Pure Oil 1 ... 4500
Chas. Hill, Pure Oil 1 ... 113
J. H. Miller, Pure Oil 1 ... 400
J. W. Peak, Pure Oil 1 ... 300
J. B. Richmond, Stewart-Gordon Oil 4 200
L. Good, Stewart-Gordon Oil 1 ... 2600
Muscott, Stewart-Gordon Oil 3 ... 100
H. Nitzke, Davis Oil Co. 1 ... 500
J. W. Campbell, Strange & Fortney 3 400
Jasper—Corning Estate, Pure Oil Co. 2-A ... 100

Wells completed ... 22
Production ... 16,438
Dry ... 1

ISABELLA COUNTY

Denver—Chas. M. Smith, Melvin & Brehm, trustee, 1 ... dry
E. E. Brown, Stoddard & Darke 1 ... dry
E. VanConent, Columbia Oil & Gas and Athey 1 ... gas
Vernon—J. Mahar, Fred W. Turner & Co. 1 ... dry

Wells completed ... 4
Gas ... 1
Dry ... 3

OCEANA COUNTY

Hart—A. Doolittle, H. C. Nelson 1 ... 100
Chesnavitch, Eureka Oil & Gas 1 ... dry
Shelby—D. Powers, James E. Flanigan 1 ... dry
Elbridge—Maud Phillips, A. S. Cochran 1 ... dry
C. Copenhaven, Johnson O. & R. 1 ... dry

Wells completed ... 5
Production ... 100
Dry ... 4

SAGINAW COUNTY

Richland—C. J. and C. Brume, Joseph Malloy & Co. 1 ... dry

MUSKEGON COUNTY

Egelston—Jac. Drent, Muskegon Oil Corp. 1 ... dry

KILGORE TO CELEBRATE

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